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The Saffron Scourge: a History of Yellow Fever in Louisiana, 1796-1905.

Jo Ann Carrigan

Louisiana State University and Agricultural & Mechanical College

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THE SAFFRON SCOURGE: A HISTORY OF
YELLOW FEVER IN LOUISIANA, 1796-1905

A Dissertation

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Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
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The Department of History

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Jo Ann Carrigan

B.A., Henderson State Teachers College, 1953

M.A., Louisiana State University, 1956

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ABSTRACT

The history of American medicine and public health is a relatively new field of endeavor for the academic historian; countless areas remain thus far almost completely unexplored. The subject of epidemic disease and its impact, for example, deserves a more thorough investigation and consideration as a significant aspect of social and intellectual history. Representing an essay into that particular area, this dissertation involves a study of yellow fever in Louisiana from the first recorded epidemic in New Orleans in 1796 through the final outbreak in the state in 1905.

Contemporary sources have supplied the bulk of material utilized. The abundance of references to yellow fever and its effects in virtually every type of historical source is itself a good commentary on the pervasive influence of the disease. Manuscript material such as personal and business correspondence, diaries and medical treatises, revealed individual reactions to epidemic yellow fever. Newspapers, medical journals, travel accounts, government

documents, and contemporary works on yellow fever and health furnished ample information about epidemic conditions as well as an insight into medical and lay ideas, attitudes, and reactions regarding the pestilence and its behavior. Secondary sources included works on Louisiana history, medicine, and public health.

Introduced by infected persons or mosquitoes on vessels from Latin American centers of yellow fever endemicity, the disease appeared in New Orleans almost every summer and frequently erupted into a severe outbreak, extending its ravages along the lines of trade and travel to other communities throughout Louisiana and the South. Between 1796 and 1850, New Orleans experienced a few cases every year and some twenty serious epidemics; the 1850's witnessed the climax of yellow fever's activity in Louisiana when the scourge struck violently four times during the decade (1853, 1854, 1855, and 1858). During the second half of the nineteenth century, yellow fever outbreaks diminished in frequency and virulence, appearing in severe epidemic form only on three or four occasions. Nevertheless, the constant threat of the disease occupied the attention of Louisianians until its final conquest in 1905.

Until the discovery of yellow fever's transmitter, the Aedes aegypti mosquito, in 1900-1901 by the United States Army Commission in Cuba, the erratic spread of the disease remained a mystery. Throughout the nineteenth century medical men and laymen attempted to adapt the age-old epidemiological theories, and later the germ theory, to the peculiar workings of the Saffron Scourge. The evolution of yellow fever etiology and epidemiology itself reflects an important phase in the history of medical thought.

The diversity of ideas regarding yellow fever's causation and transmission resulted in disagreement over means of prevention. As the battle raged among those who favored sanitation, quarantine, both, or neither, the concept of public responsibility for community health gradually emerged, found public acceptance, and was crystallized into such institutional forms as the Louisiana State Board of Health, quarantine, and other regulatory health laws. A consciousness of the federal government's role in preserving the nation's health also began to develop.

In its yearly appearances and at least thirty extensive outbreaks spread over a century of Louisiana's history,

Yellow Jack destroyed thousands of lives, cost millions of dollars, and affected almost every aspect of human affairs within its sphere of influence--economic, social, political, intellectual, medical, and religious. Ultimately, medical science and public health operations triumphed over the pestilence in this country in the systematic campaign based on the newly-formulated mosquito theory and waged against the New Orleans epidemic of 1905. Protected by federal quarantine regulations, the United States since that date has been free of epidemic yellow fever.

CHAPTER I

INTRODUCTION

The history of yellow fever in Louisiana is a long and dramatic story with many interwoven themes, colorful and controversial characters, much tragedy, some irony, and ultimately a happy ending. Perhaps the fundamental theme involves man's struggle to understand, to explain, to fight, and to conquer this pestilence which harassed Louisiana for more than a hundred years.

From the late eighteenth century down to the early twentieth century, almost every question relating to yellow fever became a subject of major controversy, in Louisiana and in every other place where the disease appeared. Was yellow fever contagious or non-contagious, of local origin or imported, a specific entity or the most malignant grade of a related class of fevers? Should quarantine measures, sanitary reform, a combination of both, or nothing at all be employed against the disease? Which proved more disastrous, the economic losses occasioned by the fever or

those resulting from quarantine itself? Which of the many forms of treatment seemed most effective in curing the malady? These and a host of other issues furnished topics for endless debate among physicians and laymen alike. Throughout the entire nineteenth century countless theories were advanced and debated. Still nothing was settled about the nature and action of the complicated disease until 1901, when the United States Army Commission in Cuba headed by Walter Reed clearly demonstrated the transmission of yellow fever from man to man by the Aedes aegypti mosquito. Not until after that discovery was man in a position to combat the pestilence successfully. For all but the last few years of its history in Louisiana yellow fever remained a mysterious malady--erratic, unpredictable, and deadly. Even with the considerable increase of knowledge regarding the disease which has slowly been uncovered during the course of the twentieth century, yellow fever still withholds many secrets from the probing intellect of scientific man. Yet in the light of present-day knowledge about the pathology, etiology, and epidemiology of yellow fever, the disease can be controlled to a high degree. Furthermore, armed with that knowledge, one can more readily understand the activities of yellow fever in epidemics of the past,

those activities which so often seemed inexplicable to eighteenth and nineteenth-century observers.

One of the more complicated maladies of man, yellow fever is an acute infectious disease occurring primarily in tropical and subtropical zones and produced by a filtrable virus. The virus is transmitted from person to person by the female Aedes aegypti mosquito. In order to become infected, the mosquito must feed on the blood of a yellow fever patient within the first three or four days of his illness. After the Aedes aegypti acquires the virus, an incubation period of ten to twelve days is required before that mosquito can transmit the disease when biting another person; the mosquito then remains infective for the remainder of its life, perhaps a month or more. When the infected mosquito bites a susceptible individual, the period of incubation before the onset of the fever is usually from three to six days.¹

Obviously, then, a rather delicate balance of circumstantial factors is necessary for the development of an

¹Charles E. Lyght, et al. (eds.), The Merck Manual of Diagnosis and Therapy (9th ed., Rahway, N. J., 1956), 966-67; Richard P. Strong, Stitt's Diagnosis, Prevention and Treatment of Tropical Diseases (7th ed., 2 vols., Philadelphia, 1944), II, 872-73, 879-82. Hereinafter cited as Tropical Diseases.

epidemic within an area where yellow fever is not endemic (that is, present at all times). First of all, the Aedes aegypti must be present in sufficient numbers to perform the act of transmission, and the weather must be warm enough to allow for mosquito activity. Further, an epidemic requires that a considerable number of susceptible persons be concentrated in a given area where the Aedes aegypti is active and that the virus be introduced into that area either by an infective mosquito or by a person in the incubation period or the earliest stage of the disease. The introduction of one infective mosquito or one case, unnoticed or unrecognized, may set off the chain reaction and result in a full-scale epidemic--or it may not, depending on the circumstances. If the imported mosquito bites only immune persons or dies before biting susceptibles, the virus does not become operative. Or if the imported case is not bitten by a female Aedes aegypti within the first three or four days of the attack, that case results in no others. In the usual pattern of urban yellow fever (as opposed to jungle yellow fever, which is another story), the continued existence of the virus itself requires the constant transmission back and forth from man to mosquito to man, and so on. Otherwise the disease will disappear completely. Only

in areas where the climate is warm enough to permit year round activity of the mosquito can yellow fever be maintained as an endemic disease. In New Orleans, with the coming of cool weather and frost each winter, the mosquito ceased to be able to transmit the virus, and the disease spontaneously died out. But the close connections with Latin America facilitated its reintroduction in the summer of each year.

Unaware of the mosquito vector and its relation to the virus and man, medical thinkers before the twentieth century found it virtually impossible to account for the strange behavior of the disease in spreading from person to person and place to place without apparent rhyme or reason. Yellow fever's activity during warm weather and its cessation with the appearance of frost led to the belief that climate was somehow a factor in its development. Native-born persons in an area where yellow fever prevailed exhibited an immunity to the disease, while strangers provided the majority of victims. It was long believed that Creoles or natives were immune because they were accustomed to the climate. The real explanation, however, lies in their having contracted in childhood mild cases of yellow fever, of which they were never aware; and one attack, no

matter how mild, confers lasting immunity.

The symptoms and signs of yellow fever include a long list of physical reactions which may be present in different combinations and exhibit great variability in different cases. Some of the symptoms are essentially similar to those of other diseases (malaria, hepatitis, influenza, dengue, etc.) so that confusion in diagnosis, especially in mild cases, is highly possible. The illness begins with fever, together with slight or rigorous chills. The temperature early reaches 102° to 103°F. In the first two to five days of the disease, nausea, vomiting, constipation, headache and muscular pain, especially in the legs and back, extreme prostration, and restlessness are characteristic. Within a few days the fever may rise to a maximum of 104°F., seldom higher. In the acute stage of the disease, jaundice or yellowness of the skin ordinarily appears, along with passive hemorrhages from almost any part of the body--eyes, ears, nose, mouth, bladder, uterus. A serious sign, but one which does not invariably occur, is the so-called black vomit. The blood from hemorrhages within the stomach is acted upon by stomach acids and the resulting product is the black vomit, which in appearance resembles coffee grounds. This material seems to gush

forth without any effort by the patient. Preceded by convulsions or coma, death may result from the damage to the liver and kidneys, the organs principally affected by the disease. Or recovery may begin from one to two weeks after the beginning of the attack; convalescence ordinarily requires several weeks.² Although the foregoing description is admittedly an oversimplification of yellow fever's action, the general picture should provide a basis for understanding the terrifying nature and revolting symptoms of the deadly disease. Parson Theodore Clapp, who lived through a succession of yellow fever epidemics in nineteenth-century New Orleans, remarked that he found it almost impossible to sleep during the periods of pestilence, so disturbed were his dreams by the agonizing sights of patients he had visited. His graphic description of a yellow fever victim could induce insomnia even today:

Often I have met and shook hands with some blooming, handsome young man today, and . . . [later] I have been called to see him in the black vomit, with profuse hemorrhages from the mouth, nose, ears, eyes, and even the toes; the eyes prominent, glistening, yellow, and staring; the face discolored with orange color and dusky red.

²Philip H. Manson-Bahr (ed.), Manson's Tropical Diseases, A Manual of the Diseases of Warm Climates (8th ed., London, 1925), 169-73; Merck Manual, 967-68.

The physiognomy of the yellow fever corpse is usually sad, sullen, and perturbed; the countenance dark, mottled, livid, swollen, and stained with blood and black vomit; the veins of the face and whole body become distended, and look as if they were going to burst. . . .³

The characteristic jaundice or yellow tint of the skin gave rise to the now universally accepted name of the disease, yellow fever. But no other ailment has ever had so many different terms applied to it. In his classic work on the disease, George Augustin set forth a list of 152 synonyms for yellow fever, compiled from American, English, Spanish, Italian, and Portuguese sources. His list included such interesting appellations as American fever, American typhus, ardent fever, bilious putrid fever, bilious malignant fever, black vomit or vomito negro, maladie de la saison, maladie du diable, Yellow Jack, and Stranger's fever.⁴ In New Orleans there was a tendency to think of the pestilence in anthropomorphic terms as the disease became more and more common during the first half of the nineteenth century. Hence, popular names for yellow

³John Duffy (ed.), Parson Clapp of the Strangers' Church of New Orleans (Baton Rouge, 1957), 95-97.

⁴George Augustin, History of Yellow Fever (New Orleans, 1909), 70-84.

fever developed, and newspaper editors and others frequently referred to that malady as "Bronze John on his Saffron Steed," "His Saffron Majesty," "The Saffron Warrior," and "The Saffron Scourge."

Whatever it might have been called at any given time, yellow fever always baffled the physicians in their attempts at treatment. Throughout the nineteenth century physicians employed various techniques and drugs for a time, and discarded them one by one for still other patterns of therapy. Numerous observers remarked that some patients died and others recovered under every conceivable form of treatment. That form of therapy which worked rather well in one epidemic often failed completely in the next, and in various cases the same therapeutic method had different results.⁵ Still there is no specific treatment for yellow fever. Complete bed rest and good nursing care are considered of vital importance. Additional therapy may be employed, but it is designed primarily to alleviate the symptoms.⁶

⁵New Orleans Medical and Surgical Journal, XV (November, 1858), 731; William L. Robinson, The Diary of a Samaritan (New York, 1860), 77-78; Erasmus Darwin Fenner, History of the Epidemic Yellow Fever, at New Orleans, Louisiana, in 1853 (New York, 1854), 57-58. Hereinafter cited as Fenner, Epidemic Yellow Fever.

⁶Merck Manual, 969; Strong, Tropical Diseases, 900-901.

The long-standing medical issues regarding yellow fever have been partially solved in the twentieth century, but with the increasing knowledge of the disease has come an awareness of more and more unknowns relating to the nature of the virus and its sometimes inexplicable activity. In addition to the medical questions relative to yellow fever, some of which have been answered and others not, certain historical difficulties encountered by earlier yellow fever historians continue to present themselves. The origin and early history of the disease is by no means clear. Apparently, it was unknown to Europeans before the discovery of the New World. Epidemics, later supposed to have been yellow fever, occurred in Vera Cruz and Santo Domingo between 1493 and 1496. Nineteenth-century opinion inclined toward accepting the southern portion of the western hemisphere as the native clime of the disease. Even George Augustin, in his History of Yellow Fever published in 1909, declared that Mexico, Central America, and the West Indies might be considered "the original cradle of the awesome scourge." He had no patience with the opinion that Africa was yellow fever's place of origin, a hypothesis advanced from time to time in the nineteenth century. Nevertheless, the most recent studies of the disease indicate a high

probability that yellow fever originated in Africa and that the disease, along with the Aedes aegypti, its transmitter, was introduced into the western hemisphere by vessels engaged in the Negro slave trade.⁷ That yellow fever in Negroes generally exhibits mild and rarely fatal effects is a factor which may be related to the African origin of the disease.

Transplanted to the New World from Africa, the yellow fever mosquito and the virus eventually gained a foothold in their new habitat. Exactly at what point this transfer was accomplished can never be determined, but apparently the first clearly recognized and definitely recorded yellow fever epidemics in the New World were those which occurred in Yucatan, Cuba, and Barbados in 1648. During the latter seventeenth century the disease established itself in the West Indies, Central America, and South America. By the 1690's it began to appear in North America,

⁷Charles-Edward A. Winslow, The Conquest of Epidemic Disease, A Chapter in the History of Ideas (Princeton, N.J., 1943), 193; Augustin, History of Yellow Fever, 85-130; 649; Strong, Tropical Diseases, 873; Josiah C. Trent (ed.), "The Men Who Conquered Yellow Fever," in Ashbel Smith, Yellow Fever in Galveston, Republic of Texas, 1839 . . . (Austin, 1951), 85-86; see also Henry Rose Carter, Yellow Fever, An Epidemiological and Historical Study of its Place of Origin, edited by L. A. Carter and W. H. Frost (Baltimore, 1931).

and from time to time throughout the eighteenth century yellow fever was transmitted from Latin America to certain Atlantic port cities, particularly Charleston, New York, and Philadelphia.⁸

Occurrences of yellow fever in early colonial Louisiana, as well as the date of the disease's first appearance in New Orleans, long have been subjects for historical speculation and disagreement. Joseph Jones, an eminent nineteenth-century Louisiana physician and prolific medical historian, carefully sifted through the evidence in an attempt to determine yellow fever's earliest history in Louisiana. He believed that the disease had been transmitted occasionally in the very late seventeenth and early eighteenth centuries to points on the American Gulf Coast through contacts with the West Indies where yellow fever prevailed. But he noted several factors which might have served to postpone the appearance of epidemic yellow fever in New Orleans: the long and tedious trip up the Mississippi to the city, the sparse population, and the limited

⁸John Duffy, Epidemics in Colonial America (Baton Rouge, 1953), 138-63; Wilson G. Smillie, Public Health, Its Promise for the Future, A Chronicle of the Development of Public Health in the United States, 1607-1914 (New York, 1955), 37-38.

commercial activity during the French colonial period. Nevertheless, Dr. Jones found it impossible to declare positively that the Saffron Scourge had never visited New Orleans under French rule. The record of disease in that city for a half-century after its establishment (1718) was "very imperfect." No medical journal or native medical work, which might have detailed the nature of prevailing diseases, ever appeared in French colonial Louisiana. Jones wisely concluded that the mere absence of medical records failed to demonstrate the total absence of yellow fever.⁹

Admitting that little could be learned from the records about eighteenth-century epidemics, Alcée Fortier, one of Louisiana's major historians, asserted that the first trace of yellow fever in connection with Louisiana history was in the report of Governor Sauvolle's death at Fort Maurepas near Biloxi in August of 1701.¹⁰ It is entirely possible, however, that the governor died of "tertian fever" (malaria) or some other unknown malady among the

⁹N. O. Med. & Surg. Jour., New Series, VII (July, 1879), 132-33, 146.

¹⁰Alcée Fortier, Louisiana (3 vols., n.p., 1914), II, 661.

sicknesses present in the settlement that summer.¹¹

A disease later supposed to be yellow fever appeared in epidemic form at Biloxi in 1702 and 1704 and at Mobile in 1704 and 1705.¹² For a sixty-year period thereafter, no specific information is available on the subject of yellow fever in colonial Louisiana. Variable nomenclature and vague symptomatic descriptions of diseases in early records complicate the historian's problem of evaluating any particular epidemic. For example, in the interior of Louisiana a disease referred to as "Calenture" erupted in 1779 and made great ravages in the Spanish settlement of Galveztown on the Amite River.¹³ Like yellow fever, this disease did

¹¹John Duffy (ed.), The Rudolph Matas History of Medicine in Louisiana (Baton Rouge, 1958), I, 11-12. Hereinafter cited as Medicine in La.

¹²Bennet Dowler, "Tableau of the Yellow Fever of 1853, with Topographical, Chronological and Historical Sketches of the Epidemics of New Orleans," Cohen's New Orleans Directory . . . of 1854 (New Orleans, 1854), 7; N. O. Med. & Surg. Jour., New Series, VII (July, 1879), 132; Alcée Fortier, A History of Louisiana (4 vols., New York, 1904), I, 51.

In relating yellow fever to Louisiana history, it should be noted that in Havana, Cuba, in 1706, that disease claimed the life of Pierre le Moyne, Sieur d'Iberville, one of Louisiana's founding fathers. Fortier, A History of Louisiana, I, 48-49.

¹³v. M. Scramuzza, "Galveztown, A Spanish Settlement of Colonial Louisiana," Louisiana Historical Quarterly, XIII (October, 1930), 576-77.

not decline until cool weather; unlike yellow fever, it first appeared in late April--a bit early for the Saffron Scourge. According to an army surgeon writing in 1899, calentura was a name applied by Cubans to a specific fever, symptomatically similar to yellow fever, sometimes existing simultaneously with it, but essentially different. He noted that a severe case of calentura might easily be confused with yellow fever.¹⁴ George Augustin, on the other hand, listed calentura as one of yellow fever's many synonyms, one which probably had originated from the notion that heat was a basic cause of the fever. Actually, the term, which described a symptom rather than a disease, could have referred to any one of a number of infectious diseases characterized by unusually high fever and delirium.¹⁵ Hence, we are left in doubt as to the exact nature of the illness in Gaíveztown in 1779.

The various years suggested by medical men and historians for the arrival of yellow fever in New Orleans include 1765, 1766, 1767, 1769, 1791, 1793, and 1796. That

¹⁴N. O. Med. & Surg. Jour., LII (September, 1899), 144-45.

¹⁵Augustin, History of Yellow Fever, 73; Duffy (ed.), Medicine in La., I, 200.

1796 represents the first unquestionable yellow fever epidemic in the Crescent City has been generally conceded by most writers on the subject. Certainly it was the first officially recorded one. Whether that epidemic also marks the initial appearance of the disease in New Orleans is the debatable issue.

In 1765 Mobile and Pensacola suffered yellow fever attacks, and New Orleans experienced an exceedingly unhealthy fall season that year. Yellow fever might well have been present, but there is no record of the specific diseases involved in that sickly season. In 1766, the year Antonio de Ulloa arrived with troops from Cuba to take over the colony for Spain, New Orleans suffered from an epidemic said to have closely resembled yellow fever.¹⁶ At least one historical work, without stating the source or supplying details, set forth 1767 as the date of yellow fever's first appearance in New Orleans.¹⁷

¹⁶N. O. Med. & Surg. Jour., New Series, VII (July, 1879), 146; Charles Gayarré, History of Louisiana (4th ed., 4 vols., New Orleans, 1903), II, 133; George W. Cable, The Creoles of Louisiana (New York, 1889), 291; John Smith Kendall, History of New Orleans (3 vols., Chicago, 1922), I, 174.

¹⁷James Alexander Robertson (ed.), Louisiana Under the Rule of Spain, France, and the United States, 1785-1807 (2 vols., Cleveland, 1911), I, 175n.

A sketch of epidemics appearing in De Bow's Review in 1846 stated: "The Yellow Fever, according to tradition, was first introduced into New Orleans in 1769, by a British vessel from Africa with slaves."¹⁸ Dr. Joseph Jones, however, found no evidence to indicate that yellow fever had been introduced into the city by slave ships.¹⁹ Bennet Dowler, another outstanding nineteenth-century medical man and student of yellow fever's history, doubted that the epidemic of 1769 had been yellow fever. It was impossible, he declared, to determine the character of the disease in question from available records. Furthermore, said Dowler, within a single generation after 1769, the scourge had appeared in the unquestionable 1796 epidemic, and those persons writing soon after that epidemic who called it the first appearance of that disease could have questioned living witnesses about any previous occurrences. And, he continued, they "would have been contradicted, had they made erroneous statements as to the period of its invasion."²⁰ Although Dowler was apparently willing to settle

¹⁸De Bow's Commercial Review, II (July, 1846), 73.

¹⁹N. O. Med. & Surg. Jour., New Series, VII (July, 1879), 132.

²⁰Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 8.

for 1796 as the date of yellow fever's first appearance as well as the first epidemic, Joseph Jones, writing some twenty years later, felt that a careful consideration of all available testimony indicated that 1796 definitely was not the first occurrence of the fever, but rather that it certainly had been present to some degree in 1791, 1794, and 1795.²¹

Around 1840 Dr. Daniel Drake, eminent mid-western physician and medical author, visited New Orleans, made personal inquiries about the first yellow fever invasion, and decided upon 1791 as the fateful year, basing his conclusion on the testimony of "a venerable citizen" of the city. As John Duffy has pointed out in The Rudolph Matas History of Medicine in Louisiana, the testimony in this case, based on memory forty or fifty years after the fact, is hardly infallible.²² The researches of Erasmus Darwin Fenner, active nineteenth-century Louisiana physician, editor, and medical historian, led him to conclude that

²¹N. O. Med. & Surg. Jour., New Series, VII (July, 1879), 146.

²²Joseph Jones, Medical and Surgical Memoirs (3 vols. in 4, New Orleans, 1876-1890), III, pt. 1, cxxxv; Duffy (ed.), Medicine in La., I, 206.

the yellow pestilence first prevailed in New Orleans in 1793. In the 1840's he discussed the problem with five elderly gentlemen who had settled in the Crescent City between 1797 and 1804, and all commented that the disease was "spoken of familiarly" when they first arrived. One of them told Fenner that he distinctly remembered having heard an eminent physician frequently remark in the early 1800's that 1793 was the first yellow fever year.²³ Here again one must raise the question of human memory's possible unreliability many years after the event. On the other hand, Berquin-Duvallon, who traveled through Louisiana in 1802, wrote: "This disease has now for seven years, made every summer, great ravages at New-Orleans. . . ." On the basis of his inquiries, he stated that yellow fever previously had been unknown in that city,²⁴ that is, before 1796.

Varying accounts and opinions, conflicting evidence

²³Erasmus Darwin Fenner, "The Yellow Fever Quarantine at New Orleans," Transactions of the American Medical Association, II (1849), 624.

²⁴Berquin-Duvallon, Vue de la Colonie Espagnole du Mississippi ou des Provinces de la Louisiane . . . en l'Année 1802 (Paris, 1803), trans. by John Davis as Travels in Louisiana and the Floridas, in the year, 1802 . . . (New York, 1806), 114, 118. Hereinafter cited as Berquin-Duvallon, Travels.

and testimony could be cited further; the foregoing should be sufficient to demonstrate the basic problem. In the final analysis, it can only be said that some yellow fever cases undoubtedly occurred at various points along the Gulf Coast and in the city of New Orleans in the years before 1796. The fact that the epidemic of that year attacked newcomers in preference to native or long-resident New Orleanians indicates a fairly extensive period prior to 1796 during which immunity might have been acquired through mild attacks of the disease. Nevertheless, in the absence of clear records on the subject before that date, the appearance of the Saffron Scourge in previous years must remain a matter for speculation. Suffice it to say that 1796 marks the first visitation of yellow fever in New Orleans widespread enough to attract much attention, to call forth official mention, and to be identified with the pestilence of Philadelphia and other eastern and southern Atlantic seaport cities, where it had prevailed intermittently since the late seventeenth century.

For the most part, the history of yellow fever in Louisiana is synonymous with the history of yellow fever in New Orleans. Any study of the disease in Louisiana must necessarily concentrate on the Crescent City as the center

of its pestilential activity. Always the most populous community in the state, New Orleans also served as the natural port of entry for the malady, introduced by infected persons or infected mosquitoes in ships coming from centers of yellow fever endemicity in Latin America. Essentially an urban disease transmitted by a household mosquito, yellow fever did not spread easily in rural areas. A certain concentration of population was required to support a full-fledged outbreak.

After Louisiana became an American territory and later a state, its population steadily increased during the first half of the nineteenth century as Americans and European immigrants came in to settle the area. From time to time, the villages along the waterways of Louisiana in constant communication with New Orleans experienced visitations of the pestilence as it spread from the Crescent City through the medium of infected persons or mosquitoes. In the second half of the nineteenth century, the development of railroad transportation facilitated the dissemination of the infection to various points around the state. Unquestionably, the impact of a yellow fever epidemic on a small or medium-sized community resulted in terror, confusion, disorder, and destruction, perhaps to an even

greater extent than in the Crescent City itself, with a sizeable immune population and an acceptance of the disease as a customary foe. Nevertheless, for the state of Louisiana, New Orleans served as the original host to the tropical fever. If that city enjoyed a relatively disease-free summer and autumn, the remainder of the state had almost no cause for worry; if New Orleans experienced a severe epidemic, other Louisiana towns might or might not be affected, depending largely on circumstantial factors involved in the transmission of the disease.

Hence, New Orleans was the yellow fever capital of the state, and in a very real sense, the yellow fever capital of the entire South because of its position as the center of trade with Latin America. Frequently, the widespread outbreaks of yellow fever in the southern states could be traced to an initial epidemic in the Crescent City. On this basis alone, it seems justifiable to devote the greatest attention to the fever's activity in New Orleans. But there is still another fundamental reason. Source material on the epidemics of the Crescent City is available in abundance; whereas, for the outbreaks in the small interior communities of Louisiana, definite information is sparse and often lacking altogether. New Orleans served as

the center of the articulate medical community, associated with the early medical schools and medical journals; and although the journals, particularly the New Orleans Medical and Surgical Journal, received and published communications concerning yellow fever's activities in localities throughout Louisiana and in other states as well, the bulk of material related to the disease in New Orleans. Furthermore, the contributions from medical men of the interior often failed to include the specific details that are so vital to the historian.

In this study, then, an attempt has been made to relate the history of yellow fever throughout the state, to introduce material on epidemics in smaller communities whenever such pertinent information has been available, and to achieve some insight into the reactions of various Louisiana towns to the outbreaks of the yellow pestilence; New Orleans, however, provides the focal point for the telling of Louisiana's story of yellow fever.

CHAPTER II

A HALF-CENTURY OF PESTILENCE, 1796-1847

During the first half-century of yellow fever's history in Louisiana, the Saffron Scourge clearly held the advantage in the age-old conflict between man and disease, and the pestilence seemed to gain in virulence with each succeeding epidemic. With epidemiological thought bogged down in theories sixteen-hundred years old and medical science in its infancy, physicians were scarcely able to cope with a disease whose nature, causation, and transmission they failed to comprehend. The germ theory and the mosquito doctrine were yet to come.

Furthermore, as the fever was reintroduced into the Crescent City summer after summer in the years following 1796, a fatalistic acceptance of its frequent recurrence became the prevailing attitude in New Orleans. The policy of the city government in matters of health was generally characterized by indifference and neglect. Physicians, commercial interests, and New Orleans newspapers fostered the delusion that New Orleans, in comparison with other

cities was relatively healthy, and in the absence of accurate mortality records, that delusion readily gained widespread acceptance within the community. Under such circumstances, one could hardly expect an enlightened program of public health. In the darkness of ignorance and indifference then, periodically yellow fever ruled the city in a summer and autumn carnival of horrors.

Although the earliest history of the disease in Louisiana, as everywhere else, is virtually impossible to unravel and reconstruct with absolute certainty, one may accept the New Orleans epidemic of 1796 as the first definitely recorded yellow fever outbreak in that city. Yet the apparent immunity of many Creoles exhibited in that epidemic indicates that the malady had been present to some degree in the area during previous years. In a series of letters to his wife, Baron Joseph Xavier Pontalba set forth an informative account of the epidemic of 1796, which together with the brief reports of the Spanish Attorney-general and the Intendant, constitute the only available contemporary records of that first widespread visitation of yellow fever in the Crescent City. According to Intendant

Juan Ventura Morales, the epidemic broke out in late August.¹ On September 6 Pontalba wrote his wife that "the maladies are increasing here, and they are now more dangerous than ever."² Throughout September, October, and early November his daily letters were filled with commentary on the raging pestilence. On several occasions the Baron noted an apparent abatement of the epidemic only to correct himself a few days later when the disease flared again.

From the very beginning Pontalba observed that the fever singled out the unacclimated, the newcomers--especially Americans and Englishmen--in preference to the Creole and long-resident population. Repeatedly he reassured his wife that the disease presented little danger except to strangers, its principal victims.³ Intendant Morales also commented on the fever's peculiarity in preferring foreigners to the natives.⁴ Such an obvious

¹Gayarré, History of Louisiana, III, 375.

²Joseph X. Pontalba to wife, September 6, 1796, in "Letters of Baron Joseph X. Pontalba to his Wife, 1796" (W.P.A. trans. typescript, Louisiana State University Library, Baton Rouge), 274.

³Ibid., September 6, 11, 24, 30, November 3, 1796, pp. 274, 284, 312, 323, 393.

⁴Gayarré, History of Louisiana, III, 375.

preference is a fairly good sign that yellow fever was not entirely new to the area.

As to the nature and origin of the fever, there seemed to be a considerable amount of doubt and uncertainty, indicating that its appearance in epidemic form was something new. Pontalba asserted that "the maladies" resulted from an overflow of the river on the opposite shore, which caused "subsequent fetid exhalations to be given off by the earth" as it dried out. Attorney-general Don Gabriel Fonvergne, in a report to the council, blamed "the stagnated waters that remain in the gutters . . . the little cleanliness and care given to them, the dead animals abandoned on them, and on the margin of the river" for the contamination of the atmosphere and the spread of infection.⁵ This concept of "fetid exhalations" or noxious effluvia arising from animal and vegetable decomposition was a common epidemiological tenet of the period, and would be echoed in medical and lay philosophy of fever causation for almost a century to come.

⁵Pontalba to wife, September 6, 11, 1796, loc. cit., 274, 284; Records of the City Council of New Orleans, Book 4079, Document 259, October 21, 1796 (W.P.A. trans. type-script, Louisiana State Museum Library, New Orleans).

In mid-September Pontalba reported to his wife the opinion of New Orleans physicians that the sickness was "the yellow fever of Philadelphia," but expressed his disagreement with that explanation. A few days later he wrote: "In common accord, people now believe that it is the same yellow fever that has been breaking out every year in Philadelphia, and which the Americans have brought along with them." Apparently, Pontalba remained unconvinced, for in late October he remarked, "I do not understand the nature of that deadly malady, but I think it to be a kind of pestilent fever."⁶ In a dispatch of October 31 the Intendant summed up the several views of the epidemic which "has terrified and still keeps in a state of consternation the whole population of this town." Some called it "a malignant fever," others, "the black vomit," and still others believed it to be the yellow fever of Philadelphia.⁷

Confronted by a relatively new and terrifying malady, the people of New Orleans employed a variety of measures in the hope of staving off the disease. Pontalba commented on the great fear among the people, especially the women, who

⁶Pontalba to wife, September 19, 24, October 30, 1796, loc. cit., 300, 312, 385.

⁷Gayarré, History of Louisiana, III, 375.

carried bits of garlic in their clothing, and burned animal skins, horns, hoofs, and tar to ward off the pestilential effluvia. In one letter he gave a full description of his precautionary measures: "I always had camphor on me," he wrote, "and also much vinegar; two demi-johns of the latter were used to sprinkle my apartments. . . . My servants, themselves, were soaked all over with the vinegar. I often chewed the quinquina . . ." and, he added thoughtfully, "I was doing all this for you. . . ." The Baron attributed his own immunity and that of several friends to their chewing of "quinquina" or quinine, which he thought helped to hold off the infection.⁸

In October Pontalba told about a recipe by Dr. Masdevall, physician to the King of Spain, which was being circulated among the people of New Orleans as a preventive against the sickness. He felt it had been largely unsuccessful. Intendant Morales, on the other hand, credited the recipe with "marvellous effects," attributing to it the relative immunity of the Spaniards and the Negroes.⁹

⁸Pontalba to wife, September 15, 28, October 30, 1796, loc. cit., 291, 321, 386.

⁹Ibid., October 10, 1796, p. 344; Gayarré, History of Louisiana, III, 375.

Baronne Carondelet, the Governor's wife, placed her faith in the preventive powers of herb-tea compound and sarsaparilla.¹⁰

Apparently Pontalba had little regard for the physicians' efforts at treating the fever's victims. When it seemed on one occasion that the epidemic was abating, he wrote: "The doctors pretend having found a remedy. . . ." Pontalba, however, attributed the declining force of the disease to "the change in the weather." The physicians contended that only "the emetics and the vesicatories" had arrested the epidemic, but the Baron refused to give any such credit to those gentlemen. He then cited several cases of successful recovery without any of the "so-called succors." Attorney-general Fonvergne reported to the city council that the "most up-to-date care and remedies" had been without results.¹¹

The epidemic of 1796 was without question a severe one. However, exact mortality figures are not available; no bureau of vital statistics, no board of health, no

¹⁰Pontalba to wife, October 15, 1796, loc. cit., 358.

¹¹Ibid., September 14, 1796, p. 290; Records of the City Council of New Orleans, Book 4079, Document 259, October 21, 1796.

systematic measures existed at that time for keeping such records. Prevailing from late August until early November, the Saffron Scourge levied a fairly heavy tribute on the Crescent City. In the second week of September Pontalba reported eight or nine victims per day. Later he wrote: "The doctors and the monks had been keeping the true number of deaths secret." For a time the death toll amounted to fifteen or seventeen deaths per day. In the last week of September the Baron reported that after an apparent decline the malady had continued to rage, claiming the lives of nine or ten Englishmen in a single day. By mid-October the main force of the epidemic was spent, but as late as November 6 the fever still caused "some ravage." The following day, November 7, Pontalba wrote that "we are now predicting the near end of the epidemic," and after that date he made no further mention of the pestilence in his letters.¹² The arrival of cold weather obviously curtailed the activities of the yellow fever mosquito.

On October 31 the Intendant stated that the parish registry listed nearly 200 deaths from all causes since

¹²Pontalba to wife, September 12, 15, 24, October 13, November 6, 7, 1796, loc. cit., 285, 291, 312, 353, 399, 402.

the outbreak of the epidemic. This figure did not include those who died outside the town limits or "the protestants who perished (and they were numerous)."¹³ Since the fever preferred strangers to Creoles, the number of Protestant victims probably outnumbered the Catholics by a considerable margin. According to the Attorney-general in a report dated October 21, the "cruel epidemic" had "led to the grave more than 250 persons."¹⁴

The population of New Orleans in 1796 probably was about 6,000, representing a two-fold increase over the figure of 1769, and including large numbers of strangers particularly liable to the fever.¹⁵ Even if the Creole population possessed a degree of acquired immunity, New Orleans still provided a fertile field for a virulent epidemic of the Saffron Scourge. Raging from late August until early November, the epidemic covered a period of at least ten weeks, during which there must have been several deaths each day. On one occasion, Pontalba mentioned a

¹³Gayarré, History of Louisiana, III, 375.

¹⁴Records of the City Council of New Orleans, Book 4079, Document 259, October 21, 1796.

¹⁵Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 9; N. O. Med. & Surg. Jour., New Series, VII (July, 1879), 147.

daily death count of eight or nine victims, and on another, as many as fifteen to seventeen per day. Even if this rate prevailed for only a short period, one might conjecture at least two to five fatalities per day for the remaining time. On that basis, a total of 350 to 400 yellow fever deaths for the entire period is probably a fair estimate.

This first great visitation of the pestilence in its side-effects on the life of the community set a pattern which would become a repetitive process during a century of epidemics to come. A general exodus from the city, a moratorium on business, a vain appeal for sanitary measures, and the expression of man's depravity as well as his humanitarianism invariably accompanied Yellow Jack's ravages in New Orleans.

As the fever gradually spread through the city in 1796, many persons hoping to escape its attack fled the community. The émigrés sought refuge in the back country or left the colony entirely for regions far to the north. Pontalba, in commenting on this flight of the unacclimated, revealed the sorry plight of business in New Orleans: "The city is almost deserted; my storehouses,

which had all been rented, are now left vacant."¹⁶ In the following years New Orleans commercial interests suffered untold losses from Yellow Jack's visits, losses so acute that every effort was put forth to conceal the existence of the disease from the people of the city and the outside world until the epidemic could no longer be hidden.

Those persons who did not wish to leave the city altogether but desired some measure of safety for themselves and their families, or who simply wanted a temporary respite from the depression of a city in despair, retired to resorts across the lake or to homes in the country or across the river. Along with his account of the grim aspects of the epidemic of 1796, Baron Pontalba also described his social activities during the pestilence, which included frequent houseparties at a friend's plantation across the river. Escaping from the plague, a large group of people amused themselves with pranks, jokes, and games. It is all slightly reminiscent of Boccaccio's ten who sought diversion in the telling of tales while hiding from the Black Death. In one letter the Baron

¹⁶Pontalba to wife, October 13, 1796, loc. cit., 353.

described a party so noisy and wild that on retiring to his room he found it necessary to barricade the door with a large table to keep the crowd from dragging him out. He justified the pranksters by pointing out that they "needed the air of the country, the maladies in town having driven them all into a state of deep melancholy." While in the city one heard nothing but talk of the epidemic, he continued, but across the river "all news of that sort is taboo, and they give themselves up to play," which included riding, racing, and "other extravagant things."¹⁷

In another letter Pontalba described more specifically some of the amusing "pleasantries" engaged in at one of the houseparties: "The ladies, on one side, found pleasure in knotting my bed sheets together, [and] in throwing water at me . . . while I, on the other, smudged their bed clothes with lamp-black, so that they became smeared all over with it." In further retaliation he applied a foul-smelling drug powder to their pillows, threw water at them, dropped pieces of wood down their chimneys at night, made holes in their chamber-pots, and engaged in other forms of devilment. Probably realizing that such

¹⁷Ibid., October 9, 1796, p. 342.

goings-on with the ladies might provoke a spark of jealousy in his wife, who was absent from the scene, the Baron added that after paying them back in kind he became bored with such things and ceased to participate--"since all such pranks, mon-amie, cannot fill the void of my days, being only amusing for a time."¹⁸ Undoubtedly in the course of every epidemic which occurred there were groups of individuals who sought relief from the pressures of fear and desolation by some means of diversion--drinking, joking, or playing games. Certainly no account of such diversion is quite as lively as Pontalba's!

New Orleans' unsanitary condition, noted so often in travel accounts, was linked with the prevalence of disease from an early period, in conformity with the theory of atmospheric contamination. Filth was blamed repeatedly as a basic cause of disease, and from time to time throughout most of the nineteenth century, appeals for sanitary reform came from newspapers, medical societies, and medical journals. Almost nothing was accomplished, however, until the latter nineteenth century. Yellow fever is not a filth disease, but sanitary improvements relating to

¹⁸Ibid., October 15, 1796, p. 358.

drainage and water supply, when they finally came, certainly helped to eliminate the disease by removing the conditions conducive to mosquito breeding. Suffice it to say here that the Attorney-general in 1796 associated the epidemic with the filthy gutters and decaying animal bodies on the river bank, and, moreover, he suggested that the city council ameliorate those conditions to prevent future epidemics.¹⁹ Then, as in later years, the recommendations resulted in little effective action.

The epidemic of 1796 and every epidemic which followed presented the opportunity for this question to be raised: Is man inherently good or bad, altruistic or depraved? Epidemics created conditions which gave men the chance to rise to the heights of heroism or to sink to the depths of callousness. And as might be expected from the paradox that is man, there were examples of both extremes. In the over-all picture it seems that the people of New Orleans generally rose to the occasion and evidenced a high degree of benevolence, almost strikingly in contrast to the stereotyped picture of moral disintegration in a plague-stricken city. In the very first yellow fever

¹⁹Records of the City Council of New Orleans, Book 4079, Document 259, October 21, 1796.

epidemic, Pontalba recorded an incident which can be scored to the dark side of man's nature. He told about the discovery of five bodies "in the backways merely covered with leaves, the trouble not having been taken to even bury them." The Baron commented indignantly: "Such terrible negligence is enough to bring on the plague. . . ." ²⁰

Similar cases in which bodies of yellow fever victims were abandoned, sometimes even by relatives, also occurred in later epidemics. However, one may safely say that these cases represented the exception rather than the rule.

On the other side of the ledger, Pontalba indirectly recorded some examples of strength and humanitarianism. He himself in ministering to the needs of several friends victimized by the malady showed a considerable amount of benevolence and fearlessness. And Governor Carondelet, believing it might intensify the general panic if he left town, courageously resisted for a time the demands of his friends and his wife that he retire to the other shore. ²¹ There is no evidence that any official or organized measures were adopted for the care and relief of indigent

²⁰Pontalba to wife, September 21, 1796, loc. cit., 306.

²¹Ibid., September 22, October 7, 30, 1796, pp. 307, 338, 385-88.

victims in this initial surprise attack. Later, as the population increased and yellow fever became a familiar enemy, both official and unofficial emergency measures occasionally were adopted for the relief of the indigent sick during an epidemic season.

Some few cases of yellow fever probably occurred during the next two years, but not until 1799 did it recur in epidemic form. Virtually no evidence exists relative to this particular outbreak, but that it was a severe one is indicated by a letter to the city council from Attorney-general Don Pedro Dulcidio Barran written in January, 1800. The public had been terribly frightened by the dreadful epidemic of the previous summer, he reported, and they feared a possible repeat performance. Imploring the aid of the administration to prevent or at least "to minimize the dreadfulness of the calamity that justly terrifies this community," he recommended certain "pressing and essential" precautions, including sanitary reforms and quarantine measures.²² No mortality statistics are

²²Records of the City Council of New Orleans and Documents Pertaining to the Government of Louisiana, 1800 to 1803, Book 4088, Document 337, pp. 9-16 (W.P.A. trans. typescript, Louisiana State Museum Library, New Orleans).

available for the epidemic of 1799, but apparently it was serious enough to provoke an even greater public reaction than the epidemic of 1796, if the Attorney-general's letter is a fair indication.

Although the records of yellow fever's visits in the early 1800's are rather sketchy and sometimes contradictory, during the first two decades of the century New Orleans experienced at least five major outbreaks of the disease: 1804, 1809, 1811, 1817, and 1819. Practically all the nineteenth-century doctor-historians, some of whom had access to records no longer extant, listed these years in their outlines of epidemics. Various writers have cited other dates as years in which the fever prevailed, but these outbreaks do not seem to rank in the same category with the more devastating ones. Sufficient evidence, however, does exist for considering 1808 another rather critical year. Some cases probably occurred in New Orleans every single year from 1796 to 1817; and no year between 1817 and 1861 passed without a few recorded cases.

In August of 1804, less than eight months after the American acquisition of Louisiana, yellow fever again appeared in New Orleans, and, finding a bountiful supply

of unacclimated individuals, subjected the city to a three-month period of death and desolation. In his official letters Governor William C. C. Claiborne outlined the course of the epidemic and thus may be credited with providing the most comprehensive account of the pestilence of 1804. By August 10 the fever had appeared, but the city was not yet considered "generally unhealthy." On August 25 Claiborne's secretary, who fell victim to the scourge a few weeks later, wrote that the disease had carried off a number of "Americans, Strangers to the climate."²³ The fever continued to increase its ravages during late August and September, and in his letters the Governor commented repeatedly on the malignant disease called yellow fever which was "particularly fatal" to Americans and other strangers. Having suffered a violent attack of the scourge early in the epidemic, Claiborne remarked, ". . . I am represented as the only American who

²³William C. C. Claiborne to James Wilkinson, August 10, 1804, Dunbar Rowland (ed.), Official Letter Books of William C. C. Claiborne, 1801-1816 (6 vols., Jackson, Mississippi, 1917), II, 306; Joseph Briggs to James Madison, August 25, 1804, ibid., 306-307; Claiborne to Madison, September 17, 1804, ibid., 337.

had yet recovered."²⁴ Apparently the disease did not confine itself solely to strangers, for in mid-September the physicians of New Orleans began to observe cases of the prevailing fever among the "old Inhabitants."²⁵

As if the problems of coping with the epidemic were not enough, another disturbing element appeared on the scene, perhaps as a corollary to the disorder occasioned by widespread disease. In September Claiborne wrote President Jefferson that the general distress of the city had been "considerably heightened by an alarm of Insurrection among the Negro's." Whether or not sufficient cause existed for such alarm, a "general Spirit of Insubordination" had been manifested, he added, and several armed Negroes had been found traveling about at night, intensifying the element of fear already present in New Orleans. Although the Governor did not believe there was adequate

²⁴Claiborne to Thomas Jefferson, August 29, 30, 1804, Clarence E. Carter (ed.), The Territory of Orleans, 1803-1812 (Vol. IX of The Territorial Papers of the United States, Washington, 1940), 279-80, 286; Claiborne to Albert Gallatin, August 31, 1804, Rowland (ed.), Claiborne Letter Books, II, 314; Claiborne to Madison, September 8, 1804, ibid., 328.

²⁵Claiborne to Jefferson, September 13, 1804, Carter (ed.), Territory of Orleans, 294.

basis for alarm, he strengthened the night patrols and ordered the city militia and volunteers to be prepared for action.²⁶ Apparently the insurrection failed to materialize as the letters contain no further mention of the subject. On at least one other occasion, during the yellow fever epidemic of 1837 in Alexandria, a slave uprising planned in the midst of the pestilence was thwarted by the early discovery of the plot and the lynching of its leaders.²⁷

The epidemic of 1804 was indeed a source of heavy affliction for the American governor of the territory. Not only did Claiborne suffer a debilitating attack of yellow fever himself, but in late September he lost both his wife and his young daughter to the dreadful malady.²⁸ Although no mortality records are available for this period, the extent of the fatalities must have been exceedingly great. Claiborne believed that "more than a third

²⁶Claiborne to Jefferson, September 18, 1804, ibid., 298.

²⁷R. F. McGuire, Diary (Louisiana State University Archives, Baton Rouge), September-October, 1837.

²⁸Claiborne to Jefferson, September 27, 1804, Carter (ed.), Territory of Orleans, 299.

of the Americans who emigrated thither in the course of the last 12 months have perished, and nearly every Person from Europe who arrived in the City during the Summer Months."²⁹ A New Orleans physician observed that "almost every person arriving from the country" experienced an attack. He also noted that with few exceptions the disease confined its activities to strangers. "Had it been otherwise," the doctor continued, "the distress would have been dreadfull indeed."³⁰ Another observer in New Orleans wrote in late October that the "calamitous Sickness goes on as direful in its effects as ever." Confirming the high fatality rate among strangers, he reported seven deaths among one group of nine persons who had come down river to the city.³¹

On a brief excursion into the country in mid-October, Governor Claiborne had occasion to observe "the Humanity of several Planters who by detaining at their Houses several

²⁹Claiborne to Jefferson, October 5, 1804, ibid., 309.

³⁰O. H. Spencer to Nathaniel Evans, October 5, 1804, Nathaniel Evans Family Papers (Louisiana State University Archives, Baton Rouge).

³¹James Sterrett to Nathaniel Evans, October 23, 1804, ibid.

Americans destined for this City . . . probably rescued them from sudden death." During the last days of October the malady still raged in New Orleans, but by November 4 the Governor reported to President Jefferson his belief that "the Fever had entirely Abated in this City, and Industry & Commerce seem to have revived."³²

Until the latter nineteenth century, newspapers, not only in New Orleans but in any town stricken with epidemic disease, adopted a policy of ignoring its presence as long as possible, then minimizing its importance if commenting at all, and finally declaring the epidemic ended--often prematurely.³³ In the early period the journals frequently avoided direct commentary altogether and only indicated the existence of the disease in published bills of mortality and obituary notices. Such a policy was of course designed to prevent or at least to hinder

³²Claiborne to Madison, October 16, 1804, William C. C. Claiborne Letterbook, 1804-05 (Louisiana State University Archives, Baton Rouge); Sterrett to Nathaniel Evans, October 29, 1804, Nathaniel Evans Family Papers; Claiborne to Jefferson, November 4, 1804, Carter (ed.), Territory of Orleans, 319.

³³See John Duffy, "A Sidelight on Colonial Newspapers," The Historian, XVIII (Spring, 1956), 230-48.

the isolation of the community by other towns, which ordinarily cut off communications and commerce with the infected center as soon as the news of an epidemic leaked out. Usually it was only a matter of time until the word spread through the city, whence it was carried to other areas by the fleeing émigrés. The subterfuge of the journals, instead of actually helping the situation, ultimately created for them a widespread reputation of hypocrisy and unreliability..

The Louisiana Gazette of New Orleans, following the accepted journalistic practice in 1804, avoided the subject of the pestilence. From August to November the newspaper occasionally noted the death of an individual from "the Prevailing sickness" and published several poems in memory of its victims. In the issue of September 28, which reported the death of Mrs. Elizabeth Claiborne, the Governor's Lady, the editors explained the temporary suspension of the Gazette, attributing it to "sickness" and expressing the hope that as the healthy season approached regular publication could be resumed.³⁴

In December of 1804 Governor Claiborne presented to

³⁴New Orleans Louisiana Gazette, August-November, 1804; September 28, 1804.

the Legislative Council a plan submitted to him by President Jefferson for the prevention of future epidemics. Observing that the geographical position of New Orleans, the gateway to the great Mississippi Valley, destined it to become a major commercial center, the President feared that epidemic disease would constitute a serious drawback to its growth and prosperity. Since the fever failed to spread to the "thin-built parts" of town, Jefferson suggested that the expansion of the city proceed along the lines of a checkerboard with the white squares left open and planted with trees. Although never effected, his suggestion does indicate that New Orleans' reputation as a yellow fever center was established almost from the beginning of its existence as an American city.³⁵ Another commentary on its growing reputation for insalubrity came from a resident of Bayou Sara who wrote in early 1805 that he would not even consider moving with his family to New Orleans-- "The Yellow fever which annually has visited that place forbade an idea of that kind."³⁶ The pestilence had rapidly

³⁵Gayarré, History of Louisiana, IV, 36-37; Duffy (ed.), Medicine in La., I, 348.

³⁶David Bradford to David Redick, July 1, 1805, David Bradford Letters (Louisiana State University Archives, Baton Rouge).

made a name for itself in the Crescent City as a visitor to be expected annually, and during certain years unpredictably to spread a blanket of malignancy across the city. In spite of the attendant dangers, the lure of the Louisiana frontier continued to attract large numbers of immigrants from other portions of America and from Europe as well. In the seven years between 1803 and 1810, the population of the territory increased from approximately 50,000 to more than 76,000, and that of New Orleans from 8,000 to nearly 25,000.³⁷

The Crescent City seems to have escaped a drastically widespread flare-up of yellow fever during the years between 1804 and 1811, although 1809 is listed in most historical accounts as a year in which the fever prevailed to a greater extent than usual. Except for reporting the loss of the second Mrs. Claiborne to the "Same dreadful malady" which had claimed the lives of his first wife, his daughter, and his private secretary in 1804, Governor Claiborne had little to say about the disease in his correspondence of 1809. On the occasion of his second wife's

³⁷N. O. Med. & Surg. Jour., New Series, VII (July, 1879), 152.

death, he complained to President Madison that the "Government House," provided for the governor's accommodation, was located in an exceedingly unhealthy area on the river front where accumulations of filth along the water's edge gave off a most offensive and pestilential atmosphere. In addition to his own personal losses, he noted that Governor Carondelet's brother and Governor Gayoso both had died there of yellow fever in previous years. These fatalities, he thought, clearly demonstrated the need for a more salubrious location.³⁸

In early December of 1809 a New Orleans resident wrote that "people die here this year without almost any warning," and he mentioned several persons who had fallen prey to yellow fever.³⁹ Of some 2,000 United States troops concentrated in New Orleans in 1809, nearly 800 died, probably a large proportion from the yellow pestilence. Possibly the disease was introduced that year by French refugees from Cuba, Jamaica, and other West Indian islands,

³⁸Claiborne to Madison, December 17, 1809, Carter (ed.), Territory of Orleans, 859-60.

³⁹Sterrett to Nathaniel Evans, December 2, 1809, Nathaniel Evans Family Papers.

whence they poured into New Orleans by the hundreds in June and July.⁴⁰

Yellow fever had wrought a considerable amount of damage the previous year, although it appeared so late in the season that a full-scale three-month rampage was averted. The unseasonably hot weather throughout November and early December in 1808 apparently allowed a vagrant case of the fever to set off a late chain reaction. Dr. Oliver Spencer, a New Orleans physician, wrote on November 5 that the weather had continued "hot, beyond example for this season of the year" and that the city was becoming unhealthy. He observed that the fever of the season had been characterized by an unusual number of cases terminating in "black vomit," a positive sign of yellow fever. On November 13 the doctor wrote a friend that he had been unusually busy since "disease, and death have of late been with us almost synonymous terms." Admitting he would like nothing better than to "forsake this scene of trouble and anxiety," he felt nevertheless that "honor and good faith"

⁴⁰Gayarré, History of Louisiana, IV, 214-20, 222.

made it necessary for him to remain "until this eventful period is past."⁴¹

Indicating further the extent of the disease in 1808, another New Orleanian wrote in mid-November: "I wish I was out of town--for its very sickly--people are running into the Country very fast." As late as November 20 he remarked again that "the Yellow fever is raging much in town."⁴² Had the infection appeared earlier in the season, a major disaster would doubtless have resulted. During every sickly season which occurred, New Orleanians hoped and prayed for an early frost, the one factor which experience had demonstrated capable of terminating Yellow Jack's activities.

The next major epidemic of the early nineteenth century occurred in 1811. In mid-August Governor Claiborne noted that the "Fevers of New-Orleans" had already commenced with "Symptoms which forbode much mortality."⁴³ A

⁴¹Spencer to Nathaniel Evans, November 5, 13, 1808, Nathaniel Evans Family Papers.

⁴²Samuel Philips to John M. Pintard, November 13, 20, 1808, John M. Pintard Papers (Louisiana State University Archives, Baton Rouge).

⁴³Claiborne to Gallatin, August 19, 1811, Carter (ed.), Territory of Orleans, 944.

French physician theorized in early September that the prevailing fevers were not contagious but rather were due to the extremely hot weather and an imprudent "mode of living" among certain individuals. The common usage of "Strong and irritating medicines," he thought, helped to increase the death toll.⁴⁴ This criticism of harsh medicine was directed against American physicians following the heroic practice, who administered large quantities of mercurials in an attempt to purge the fever from the system. The French on the other hand preferred a milder regimen.

In a letter of October 8 the Governor informed President Madison that New Orleans continued under the influence of "that dreadful Scourge, the Yellow Fever," and, as usual, the newcomers suffered the greatest losses, although the old settlers were not entirely exempt from attack. To the Secretary of the Navy in late October he wrote that the fever, still raging, had proved highly destructive to the Marine Corps, having carried off two

⁴⁴ James Mather to Claiborne, September 9, 1811, ibid., 947.

valuable officers and more than a third of the privates.⁴⁵
 A New Orleanian, commenting on the sad state of affairs in the fall of 1811, complained: "We have blue times of it here--every kind of produce dull & no sale--and in expectations of a War with Eng--Cotton will not sell--and to crown all our City Continues very sickly--and a great scarcity of money."⁴⁶

As usual, the Louisiana Courier and the Louisiana Gazette neglected the subject of yellow fever throughout the course of the epidemic. After nearly two months of sickness in the city, the Courier noted briefly on October 2 that two young mothers had fallen victim the day before to the "autumnal fevers" raging in "our unfortunate country." Both the Courier and the Gazette alluded indirectly to the disease in reporting on the constitutional convention, which was to draft the document in preparation for Louisiana's statehood. Assembling in New Orleans in early November, the convention members had agreed to

⁴⁵Claiborne to Madison, October 8, 1811, ibid., 948; Claiborne to Paul Hamilton, October 28, 1811, Rowland (ed.), Claiborne Letter Books, V, 369.

⁴⁶William Montgomery to Nathaniel Evans, October 4, 1811, Nathaniel Evans Family Papers.

adjourn until November 18 because of the city's unhealthy condition.⁴⁷

Reports from the Protestant sexton, the manager of Charity Hospital, and Father Antoine added up to a total mortality of 210 in August and 262 in September, and the city recorder listed 241 deaths during the month of October. Of the 713 fatalities during the three-month epidemic period of 1811, probably 500 or more represent yellow fever deaths.⁴⁸

It is noteworthy that the pestilence of 1811 was disseminated from New Orleans to St. Francisville, apparently the first time the disease had spread in Louisiana beyond the confines of the Crescent City.⁴⁹ In subsequent epidemics yellow fever gradually made inroads into other Louisiana towns, traveling along the lines of commerce from New Orleans.

⁴⁷New Orleans Louisiana Courier, October 2, November 6, 1811; Louisiana Gazette, November 5, 1811.

⁴⁸Mather to Claiborne, September 9, October 12, 1811, Carter (ed.), Territory of Orleans, 946, 949; Duffy (ed.), Medicine in La., I, 350.

⁴⁹J. M. Toner, "Reports Upon Yellow Fever, The Distribution and Natural History of Yellow Fever as it has Occurred at Different Times in the United States," Reports and Papers of the American Public Health Association, I (1873), 373; Augustin, History of Yellow Fever, 899.

After a respite of five years, the yellow pestilence once again devastated New Orleans in the violent epidemic of 1817, and still again only two years later in the even more destructive visitation of 1819. At the close of the epidemic of 1817, Drs. Adrien Gros and N. V. A. Gérardin presented a report on the disease to La Société Médicale, the first association of physicians in Louisiana. They stated that the fever had become fully epidemic in July, increased its intensity during August, and finally disappeared in October, earlier than usual in both its arrival and its departure. As causes of the malady they listed the topographical situation of the city, abundant rainfall, stagnant water, excessive summer heat, and an aggregation of unacclimated strangers. Furthermore, they observed that frost and cold weather seemingly destroyed the deleterious gas in the atmosphere. In concluding the report, Gros and Gérardin suggested that the state of Louisiana, with its population and commerce increasing daily, should undertake the responsibility for screening out the morbidic influences likely to be introduced by commerce, and that the state should double its efforts to maintain the public health without which there could be no lasting prosperity--

an enlightened attitude indeed!⁵⁰

Increasing sentiment in favor of state action against the pestilence led to the passage of an act by the state legislature early in 1818, creating a board of health for New Orleans and providing for quarantine regulations. When cases of yellow fever appeared in the summer of 1818 in spite of the attempt at quarantine, a reaction set in and the legislature repealed the law in March of 1819. The violent epidemic of 1819 and a moderate one in 1820 occasioned another experiment with health regulations and quarantine, which were provided for in a state law of 1821. Again the defenses proved inadequate to stem the tide of the pestilence which continued to appear regularly each summer. Having lost all faith in quarantine and under pressure from commercial interests, Louisiana lawmakers repealed that measure in 1825.⁵¹ The theory of importation

⁵⁰A. A. Gros et N. V. A. Gérardin, Rapport fait a la Société Médicale sur la Fièvre Jaune qui a régné d'une Maniere Epidémique pendant l'Été de 1817 (Nouvelle-Orléans, 1818), 5-6, 59-62.

⁵¹"An Act to Establish a Board of Health and Health Office, and to Prevent the Introduction of Malignant, Pestilential and Infectious Diseases into the City of New Orleans," Acts Passed at the Second Session of the Third Legislature of the State of Louisiana . . . 1818 (New Orleans, 1818), 124-52; "An Act to Repeal an Act Entitled

fell into disrepute and the idea of local causation continued to dominate yellow fever philosophy until the Great Epidemic of 1853 forced a re-evaluation.

Having escaped a drastic outbreak of the fever in 1818 (only 115 victims),⁵² the citizens of New Orleans probably anticipated a few years of relative freedom before the next virulent wave of pestilence. Yellow fever, demonstrating its truly unpredictable nature, overwhelmed the city again in 1819. One resident said of the fever that season, "it's worse than I have ever known it."⁵³

When the city returned to normal, a committee of the medical society again prepared a report on the scourge

'An Act to Establish a Board of Health and Health Office, and to Prevent the Introduction of Malignant, Pestilential and Infectious Diseases into the City of New Orleans,' "Acts Passed at the First Session of the Fourth Legislature of the State of Louisiana . . . 1819 (New Orleans, 1819), 70-72; "An Act to Provide Against the Introduction of Infectious Diseases . . . , "Acts Passed at the First Session of the Fifth Legislature of the State of Louisiana . . . 1821 (New Orleans, 1821), 68-92; "An Act to Repeal an Act Entitled 'An Act to Provide Against the Introduction of Infectious Diseases,' "Acts Passed at the First Session of the Seventh Legislature of the State of Louisiana . . . 1824 (New Orleans, 1824 & 1825), 210-12.

⁵²N. O. Med. & Surg. Jour., New Series, VI (March, 1879), 699.

⁵³Kenny Laverty to A. P. Walsh, September 22, 1819, A. P. Walsh Papers (Louisiana State University Archives, Baton Rouge).

of New Orleans. The report compared the epidemics of 1817 and 1819, noting their similarities and their differences. Both years witnessed the first cases in May, but in 1817 the epidemic period extended from July to late October, and in 1819, from August to mid-December. In both epidemics the fever centered its attacks mainly upon Europeans or Americans fresh from the North, but its victims each time included some long-time residents and a few Creoles as well. Not a single Negro was affected by the fever of 1817; some died in 1819.⁵⁴ What absolute generalizations could one make about such a disease? From the earliest attempts at analysis until its ultimate conquest by science, yellow fever evidenced its variability and its apparent unpredictability.

Mortality statistics are available in abundance for the epidemics of 1817 and 1819; however, many conflicting sets of figures exist. The recording of deaths and burials then left much to be desired in regard to systematic procedure and accuracy. Even when fairly accurate burial lists are available, it is virtually impossible to

⁵⁴Rapport publié au nom de la Société Médicale de la Nouvelle-Orléans sur la Fièvre Jaune, qui y a regné Epidémiquement, durant l'Été et l'Automne de 1819 (Nouvelle-Orléans, 1820), 7, 35-36.

determine the number of deaths caused by any one particular disease. Burial certificates too frequently failed to state the exact cause of death, and the problem is complicated further by the difficulties of inexact diagnosis and haphazard nomenclature. From records of the various cemeteries, reports of the medical society, and other data available to him, Dr. Bennet Dowler in the mid-nineteenth century estimated some 800 deaths from yellow fever in 1817, probably a conservative figure.⁵⁵

Calculating the death toll of the even more destructive epidemic of 1819 presents similar stumbling blocks. Benjamin Latrobe, the great American architect, writing his Impressions during the epidemic, noted that "no exact register is any where kept of deaths and burials, & uncertainty on this subject is inevitable on many accounts." He estimated the fatalities from August to mid-September at ten or twelve to forty-six per day, and considered a report he heard of fifty-three in one day as not at all improbable.⁵⁶ The Louisiana Courier, rising to the defense

⁵⁵Jones, Medical and Surgical Memoirs, III, pt. 1, cxliv.

⁵⁶Benjamin Latrobe, Impressions Respecting New Orleans, edited by Samuel Wilson, Jr. (New York, 1951), xxii, 146. Latrobe himself fell victim to yellow fever in the mild epidemic of 1820.

of the city's reputation in mid-November, attempted to counteract the so-called exaggerations circulating inside and outside New Orleans. The editor denied the report of over fifty burials in one day and asserted that days of as many as twenty-five were hardly common. Furthermore, he felt the need to point out that, except for a few cases, the disease attacked only those persons having recently arrived in the area--as if this factor greatly lessened the seriousness of the situation.⁵⁷ Newspapers, medical journals, and other defenders of New Orleans' inherent salubrity often employed this kind of reasoning to justify the "seeming" unhealthiness of the Crescent City throughout much of the nineteenth century.

Estimates of the yellow fever mortality in 1819 vary from 425 to 6,000.⁵⁸ A cautious conjecture based on the total mortality during the year would place the number of yellow fever deaths at less than 1,000. Since the available mortality reports listed only those deaths within

⁵⁷Louisiana Courier, November 15, 1819.

⁵⁸Yellow Fever Statistics (undated pamphlet in Rudolph Matas Medical Library Pamphlet Collection, Tulane University Medical Library, New Orleans), 57; Jones, Medical and Surgical Memoirs, III, pt. 1, cxliv.

the incorporated limits of the city, however, additional yellow fever victims in the suburbs conceivably might have increased the figure to 1,500 or even 2,000.⁵⁹

In 1817 the scourge again had visited St. Francisville in West Feliciana Parish, and on the way up the Mississippi stopped off at Baton Rouge as well. In 1819, in addition to New Orleans, Baton Rouge, and St. Francisville, Yellow Jack victimized still another city--Alexandria on the Red River. During both of these epidemics the seeds of pestilence traveled up the Mississippi to Natchez, and frequently thereafter that city served as host to the fever.⁶⁰

In the course of the 1820's yellow fever appeared in New Orleans without fail every summer. If one includes the mild outbreaks, which by this time mean those claiming from 100 to 400 victims, seven years of the decade witnessed epidemics of varying degrees.⁶¹ Their sensitivities

⁵⁹Duffy (ed.), Medicine in La., I, 360; Jones, Medical and Surgical Memoirs, III, pt. 1, cxliv.

⁶⁰Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 845, 899; N. O. Med. & Surg. Jour., V (September, 1848), 227.

⁶¹N.O. Med. & Surg. Jour., XV (November, 1858), 818-19; XXIII (January, 1870), 25.

dulled by the tremendous human losses sustained in 1817 and 1819, New Orleanians were scarcely impressed by a toll of 400, and an annual tribute to the fever of a mere hundred, more or less, generally came to be expected as one of the inexorable facts of life. Two epidemics of this decade stand out as particularly severe ones: 1822 and 1829.

By August of 1822 a number of cases had occurred, and at the beginning of September the disease suddenly reached epidemic proportions. Raging violently until the end of October, the pestilence for a time carried off as many as thirty persons per day.⁶² A Frenchman, residing in the vicinity of New Orleans, wrote his sister in mid-September: "The terrible yellow fever has made ravages in the city since the first of the month, the unfortunate strangers being the principal victims." In his opinion, the malady had been transmitted from Pensacola to New Orleans by the Americans. "The foreigners who can are leaving," he remarked, "and the fight will end for lack of

⁶²Pierre Frederick Thomas, Essai sur la Fièvre Jaune d'Amérique . . . avec l'Histoire de l'Épidémie de la Nouvelle-Orléans en 1822 . . . (Paris, 1823), 110.

fighters."⁶³ At the beginning of the outbreak the mayor of New Orleans proclaimed that the necessary means would be provided for evacuating indigent unacclimated strangers to the other side of Pontchartrain until the conclusion of the sickly season.⁶⁴

The Louisiana Gazette in mid-September advised all strangers to leave the Crescent City until the fever subsided.⁶⁵ Although continuing the standard policy of delayed reporting and understatement, some newspaper editors had recognized the fact that when an epidemic was well under way and could no longer be ignored, a diminution of the unacclimated in the city meant less fuel for the fever and hence a more rapid dying out of the pestilential fire. Sometimes, however, the dispersion of the strangers only served to spread the disease. At any rate, the fever found ample fuel to keep it raging in New Orleans through October, and sporadically through November.

⁶³Ferdinand de Feriet to Janica de Feriet, September 15, 1822, Ferdinand de Feriet Letters, I (1816-1825) (Manuscripts Section, Howard-Tilton Memorial Library, New Orleans).

⁶⁴Thomas, Essai sur la Fièvre Jaune d'Amérique, 111.

⁶⁵Louisiana Gazette, September 14, 1822.

Ferdinand de Feriet, residing just outside New Orleans, described the diversionary activities which took place in his home during the epidemic of 1822: "To pass away the time, the neighborhood assembles sometimes at our house and play a comedy in a little theater which I have had arranged." There were two "troupes" of actors, "the children and company for the French pieces, and some American neighbors for the English pieces." He considered "this little distraction . . . an antidote against the cursed yellow fever."⁶⁶

Mortality estimates for 1822 ranged from 800 to 2,000.⁶⁷ Niles' Weekly Register reported in October that 700 to 800 persons had died of the fever in September alone.⁶⁸ The final tally of Dr. Pierre F. Thomas, on the scene at the time, set the total yellow fever mortality at 1,400, a figure concurred in by the Louisiana Gazette.⁶⁹

⁶⁶Ferdinand de Feriet to Janica de Feriet, October 7, 1822, loc. cit.

⁶⁷N. O. Med. & Surg. Jour., XXIII (January, 1870), 25.

⁶⁸Niles' Weekly Register, October 26, 1822.

⁶⁹Duffy (ed.), Medicine in La., I, 367.

The willingness of the journal editor to accept this total probably indicates that several hundred should be added to it.

After 1822 a six-year intermission ensued, broken only by relatively mild outbreaks of the disease. In 1829 the pestilence again went on the rampage. The Louisiana Courier incurred the wrath of other New Orleans newspapers by printing as early as July 10 a letter to the editor announcing the appearance of yellow fever in the city and advising strangers to evacuate. A journalistic battle developed as the Price-Current and the Mercantile Advertiser insisted the city was unusually healthy in spite of attempts to discredit its salubrity. Undaunted, the Courier editor continued his frank reporting and on August 12 commented at length on the pestilence which "threatens entire desolation to our city." Again he warned the unacclimated to disperse. The fever continued its ravages throughout August and September, but by October 12, according to the Courier, the early arrival of cool weather had terminated the epidemic. Absent citizens were assured that they might return home in perfect safety.⁷⁰ The

⁷⁰Louisiana Courier, July 10, 11, 13, August 12, September 7, 23, October 5, 12, 1829.

epidemic of 1829 resulted in at least 900 fatalities and probably more.⁷¹

In the decade of the 1820's yellow fever traveled in Louisiana beyond New Orleans practically every year, varying its itinerary from season to season, sometimes appearing in Opelousas, Donaldsonville, Natchitoches, and Thibodaux, as well as its most frequently visited points-- Alexandria, Baton Rouge, and St. Francisville.⁷²

During the 1830's and 1840's the scourge of New Orleans followed the same ill-defined pattern which vaguely characterized its activities in the three preceding decades: no year passed without the occurrence of at least a few cases; five to seven years of each decade witnessed outbreaks of the disease, varying from mild to

⁷¹N. O. Med. & Surg. Jour., New Series, VI (March, 1879), 699.

⁷²Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 845, 852, 893, 899; N. O. Med. & Surg. Jour., V (September, 1848), 227; G. P. Whittington, "Rapides Parish, Louisiana--A History," Louisiana Historical Quarterly, XVI (July, 1933), 431; Erasmus Darwin Fenner, "Report on the Epidemics of Louisiana, Mississippi, Arkansas, and Texas in the year 1853," Transactions of the American Medical Association, VII (1854), 512; McGuire Diary, 41; St. Francisville Asylum and Feliciana Advertiser, September 12, October 17, 24, 1822; Alexandria Louisiana Herald, September 7, 1822, September 17, 1823; Louisiana Courier, October 5, 1827.

violent; and of the five to seven outbreaks in each ten-year period, at least two or three wrought an extraordinary amount of damage in relation to the others. The major visitations of the thirties and forties occurred in 1833, 1837, 1839, 1841, and 1847.

Although not particularly severe, the yellow fever epidemic of 1832 is noteworthy for its association with the first appearance of Asiatic cholera in New Orleans. A mild outbreak of the Saffron Scourge was in progress when Asiatic cholera arrived on the scene in late October,⁷³ and for a time the Crescent City suffered the simultaneous activities of two pestilences. When cool weather set in, yellow fever subsided, while the cholera continued its ravages unhindered throughout the winter months. According to Dr. Joseph Jones, the combined force of the two plagues raised the total mortality of New Orleans in 1832 to more than 8,000 in a population of about 55,000, and "marked this year as the most terrible in the annals of this city," a year in which one-seventh of the entire population died! Of the 8,000 deaths that year from all causes, Asiatic

⁷³Louisiana Courier, September 29, October 20, 27, 1832.

cholera claimed over 4,000 and yellow fever carried off about 400.⁷⁴

Again in the following year New Orleanians bore the burden of the two deadly maladies, with Asiatic cholera taking 1,000 additional victims and Yellow Jack even more.⁷⁵ In an account of the yellow fever epidemic of 1833 written immediately thereafter, Dr. Edward H. Barton of New Orleans described it as the "most violent and malignant of the Epidemic Yellow Fevers with which this city has ever been visited." Following a general pattern which had become all too common, the fever commenced in early August and continued until early November. Dr. Barton made a rather interesting observation which could have furnished a clue for the solution of the perennial puzzle of yellow fever causation and transmission. He noticed the unusual quantity of flies and mosquitoes in New Orleans preceding the epidemic and remarked that "the latter continued throughout

⁷⁴Jones, Medical and Surgical Memoirs, III, pt. 1, cccvi; see also Leland A. Langridge, "Asiatic Cholera in Louisiana, 1832-1873" (M. A. Thesis, Louisiana State University, Baton Rouge, 1955).

⁷⁵Jones, Medical and Surgical Memoirs, III, pt. 1, cccvi.

the season."⁷⁶ Others before Barton had noticed this phenomenon and others would do so in years to come, but not until 1900 was the connection between the Aedes aegypti mosquito and yellow fever definitely established.

In late August of 1833 the Louisiana Courier declared that the raging fever presented a more malignant type than it had for many years, and the editor advised strangers and absent citizens to stay away from the city. The interment reports published through September and October indicated a death toll ranging from twenty to fifty per day for at least six weeks.⁷⁷ Drs. Barton and Jones both estimated 1,000 yellow fever deaths for 1833.⁷⁸ If this calculation is approximately correct, the yellow fever mortality in 1819 and 1822 actually reached a higher figure within a smaller population. Possibly the allusion made by Barton and the Courier editor to the violent and malignant nature

⁷⁶Edward Hall Barton, Account of the Epidemic Yellow Fever, which prevailed in New Orleans during the Autumn of 1833 (Philadelphia, 1834), iii, 7, 9.

⁷⁷Louisiana Courier, August 31, September 10, 12, October 10, 1833.

⁷⁸N. O. Med. & Surg. Jour., New Series, VI (March, 1879), 699.

of the disease referred to an unusually high case fatality rate. This rate may vary in different epidemics and under different circumstances from seven to sixty per cent, and sometimes it may even go as high as eighty-five per cent.⁷⁹

Three summers went by before the next drastic visitation of the Saffron Scourge. In late July of 1837 the New Orleans Picayune optimistically reported the city free of any widespread sickness and predicted the season would pass without an epidemic. "At present no city in the union is more healthy or more pleasant than New Orleans," the editor proudly asserted. Nevertheless, he urged the city authorities to execute the "wholesome ordinances" previously enacted for the improvement of sanitary conditions.⁸⁰

In early August of 1837 the Picayune admitted the existence of a few scattered cases of fever in the city "as there is every summer," but expressly denied any "general sickness." In late August and early September Crescent City newspapers finally admitted the epidemic

⁷⁹George M. Sternberg, Report on the Etiology and Prevention of Yellow Fever (Washington, 1890), 73; Merck Manual, 968.

⁸⁰New Orleans Daily Picayune, July 25, 1837.

proportions of the disease, and reported from seventy-five to a hundred deaths per day.⁸¹ The editor of the Picayune in the first week of September set forth a graphic description of the unhappy situation:

The levee is dull, dreary and lifeless at this time. No business doing, and the few ships in port are losing money for the want of cargoes. Steamboats arrive but seldom, and bring neither news, money or goods. Every person feels like sleeping or running away for the next three weeks and a half--but most of those now in the city are bound to stay, to fulfil engagements, live or die. We make out to bury our dead, drink juleps, or brandy toddies . . . talk to each other, [and] read letters and the news of the day. . . .⁸²

Also noting the dullness of the market in early September, the editor of the New Orleans Price-Current asserted optimistically that the pestilence would eventually come to a halt, crops would seek the great market of the southwest, and the wheels of trade would move again. By early November his prophecies came to pass as the epidemic waned, strangers and absent citizens poured into the Crescent City, and business operations gradually showed improvement.⁸³

⁸¹Ibid., August 4, 31, 1837; New Orleans Bee, August 24, September 5, 1837.

⁸²Picayune, September 6, 1837.

⁸³New Orleans Price-Current and Commercial Intelligencer, September 9, 23, November 4, 1837; Picayune, November 10, 1837.

The recurring and vexatious problem of obtaining accurate mortality statistics attracted the attention of the Picayune editor, who considered the graveyard reports of doubtful accuracy and noted that five or six cemeteries in the city did not issue reports at all. "Until a Board of Health is organized," he complained, "and regular reports kept . . . we may expect a wide difference of opinion as to the mortality of our city at this season. . . ." ⁸⁴ Later estimates of the yellow fever mortality of 1837 set the figure at 1,300. ⁸⁵ But with the newspapers reporting a daily average of seventy-five to a hundred deaths early in the epidemic and thirty to forty when the malady had abated considerably, ⁸⁶ it seems that the total should be much higher.

The sickly season of 1839 started off as usual in July with the Picayune's vehement denial of the reports and exaggerations circulating among the river towns on the

⁸⁴Picayune, September 13, 1837.

⁸⁵N. O. Med. & Surg. Jour., New Series, VI (March, 1879), 699.

⁸⁶Picayune, August 31, September 13, 1837; Price-Current, October 2, 1837.

subject of disease in New Orleans.⁸⁷ On August 3, the Bee announced that yellow fever existed in the Crescent City, but not "to an alarming extent." Three days later the Picayune also acknowledged its presence, while expressing full confidence that the disease would not assume an epidemic form. Pointing out that the victims thus far had been confined to the laboring class, the editor felt certain that those persons following a program of moderation and prudence had little to fear. Again on August 9 he reassured the readers that the malady preferred strangers, sailors, and laboring men. "To those who live regularly and pay attention to cleanliness," the Picayune editor declared, "we think there is little cause for apprehension." Likewise, the editor of the Bee consoled the good citizens of New Orleans with the fact that the epidemic of 1837 had been much more "calamitous" and that the laboring classes and strangers were bearing the brunt of the current attack.⁸⁸ Yellow Jack, no respecter of persons, seemed to indicate class-consciousness only because the more settled

⁸⁷Picayune, July 13, 24, 26, 1839.

⁸⁸Bee, August 3, September 3, 10, 1839; Picayune, August 6, 9, 11, 1839.

well-to-do portions of the population, for the most part, belonged to the ranks of the acclimated. Whenever the fever did spread to the better sections of town, any nonimmune, no matter how wealthy, was fully liable to attack.

The epidemic of 1839 reached its peak by mid-September, probably because of the relatively small number of unacclimated persons remaining in the city who had not already suffered an attack. Still the Picayune warned strangers and "our absent friends" against flocking into New Orleans until the danger was clearly over, and not until late October did that journal declare New Orleans healthy once again and assure the absent citizens a safe return. By November 5 the Crescent City was characterized by brisk activity as strangers and returning citizens poured in and steamboats and vessels arrived at the wharves for a resumption of the normal hustle and bustle of city life.⁸⁹ According to available records, inaccurate as they might be, the fever of 1839, somewhat less malignant than that of 1837, claimed about 800 victims.⁹⁰

⁸⁹Picayune, September 13, 15, 19, October 22, November 5, 1839.

⁹⁰N.O.Med. & Surg. Jour., New Series, VI (March, 1879), 699.

Demonstrating its capricious nature, the Saffron Scourge seems to have confined its activities to New Orleans during most of the 1830's, except in the major outbreaks of 1837 and 1839 when it again visited some of its old haunts and extended its ravages to several new points. On one other occasion during that decade it appeared in Louisiana outside the Crescent City: in Alexandria in 1831, when only two cases were reported in the Crescent City. During the epidemic of 1837 the fever spread to Baton Rouge, Plaquemine, Opelousas, Washington, and Alexandria. The year 1839 witnessed Louisiana's most extensive outbreak of yellow fever up to that time, when the pestilence committed its ravages not only in New Orleans but appeared also in Thibodaux, Plaquemine, Port Hudson, St. Francisville and Bayou Sara, St. Martinville, Washington, New Iberia, Opelousas, Franklin, Donaldsonville, Baton Rouge, Alexandria, and Natchitoches.⁹¹ In November of 1839 a New Orleanian wrote his brother: "The sickness has not been

⁹¹Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 776, 844-902; Edwin A. Davis (ed.), Plantation Life in the Florida Parishes of Louisiana, 1836-1846, as Reflected in the Diary of Bennet H. Barrow (New York, 1943), 163-69; François Charles Deléry, Précis Historique de la Fièvre Jaune (Nouvelle-Orléans, 1859), 20; Picayune, October 3, 1839.

half so bad this Season as in 1837 (when I had it)--not in the City but the country has been more troubled with it than ever it was before. & in most of the Towns on the coast and Rivers it has been very fatal."⁹² River and coast towns outside Louisiana stricken with yellow fever that year included Vicksburg, Natchez, Fort Adams, Biloxi, Houston, Galveston, Mobile, Tampa, Savannah, Augusta, and Charleston.⁹³

Having satiated its appetite in 1839, the pestilence gave the citizens of New Orleans a breathing spell in the summer of 1840 when only three yellow fever deaths were reported,⁹⁴ but deluged the city again the following summer with a wave of virulence. Although New Orleans was supposed to be one of the healthiest cities in the Union throughout most of the summer of 1841, the Bee conceded on August 3 that several fatal cases of yellow fever had

⁹²A. D. Gove to Lewis Gove, November 8, 1839, A. D. Gove Letters (Louisiana State University Archives, Baton Rouge).

⁹³Deléry, Précis Historique de la Fièvre Jaune, 21.

⁹⁴N. O. Med. & Surg. Jour., New Series, VI (March, 1879), 699.

occurred in the city.⁹⁵ On August 18 the Board of Health announced an increase of "the acclimating fever," stated their "serious apprehensions in regard to the future," and requested that physicians report daily to the board the number of new cases under treatment.⁹⁶

The epidemic grew steadily worse as August passed, and the fever continued to rage in September. In early October a temporary abatement occurred, but an influx of strangers furnished fresh fuel, and the pestilence flared again. Finally on October 26 the Picayune proclaimed: "The Yellow Fever is dead-dead-dead!" Joyfully, the editor noted that only nine fever deaths had occurred the day before!⁹⁷ The Bee waited until November 3 before reporting the conclusion of the epidemic. Graphically depicting the city in the act of casting off its blanket of gloom and dejection, the editor wrote:

Business dawns once more upon us; strangers
begin to arrive, old friends are flocking in;

⁹⁵Picayune, June 27, July 22, August 1, 4, 7, 1841; Bee, July 20, August 3, 1841.

⁹⁶Picayune, August 18, 1841.

⁹⁷Price-Current, August 28, September 11, 25, October 9, 1841; Bee, September 9, 16, 1841; Picayune, August 20, 31, September 9, 22, October 3, 8, 9, 12, 20, 26, 1841.

the streets are refilling; the thorough-fares wear a busy and thronged aspect; the cares, bustle, pleasure of the present, and anticipations of the future, occupy every mind, and the horrors of the past will soon be remembered no more. Forgetfulness is sometimes a beneficent faculty.⁹⁸

The pestilence of 1841 had raged "with a virulence rarely equalled during the most deadly seasons."⁹⁹ The official count set the number of yellow fever deaths at 1,325; Dr. Joseph Jones estimated 1,800.¹⁰⁰ Considering the fact that the editor of the Bee on November 3 set forth an estimate of 1,500 fatal cases¹⁰¹ and realizing that editors had a tendency to minimize rather than to exaggerate such matters, one is inclined to accept Dr. Jones' figure as a fair approximation of the actual mortality.

New Orleans enjoyed a five-year period of relative freedom from the fever between 1841 and 1847. In 1843 the malady claimed nearly 700 persons,¹⁰² but in a population

⁹⁸Bee, November 3, 1841.

⁹⁹Price-Current, September 25, 1841.

¹⁰⁰New Orleans Directory for 1842 (New Orleans, 1842), II, 16; N. O. Med. & Surg. Jour., New Series, VI (March, 1879), 699.

¹⁰¹Bee, November 3, 1841.

¹⁰²N. O. Med. & Surg. Jour., New Series, VI (March, 1879), 699.

of over 100,000, and after epidemics which carried off nearly 2,000, the outbreak of that year could only be considered a rather moderate one.

Yellow Jack began to appear early in July of 1847 in various parts of the city, and the number of cases steadily increased. On August 2 the Board of Health announced the arrival of the epidemic. As usual, the disease attacked "the lower class" first, but by late August its influence had extended to "all ranks of society."¹⁰³ On August 31 the editor of the Bee, observing the loss of five "gentlemen of the community," commented that "neither rich nor poor can now claim exemption."¹⁰⁴ The pestilence increased in virulence throughout the weeks of August and ultimately reached its summit during the first week of September, after which a gradual decline followed. By October 18 the Board of Health felt safe in declaring the cessation of the epidemic, but cautioned that some cases might be expected to occur for at least another month. Cases continued to appear as late as December, and the

¹⁰³Ibid., IV (September, 1847), 274.

¹⁰⁴Bee, August 31, 1847.

last fatality occurred during the week ending December 25.¹⁰⁵

As the nineteenth century progressed, practically every major outbreak of yellow fever seemed more devastating than the last, as if the disease were gradually gaining momentum for the incredibly destructive epidemics of the 1850's. In terms of the increasing population of New Orleans, which almost tripled from 1830 to 1850,¹⁰⁶ the pestilence encountered a constantly growing field for exploitation. Nevertheless, population growth does not furnish a complete explanation for the mounting impact of epidemics during the first half of the century. The mysterious and essentially erratic nature of epidemic disease cannot always be explained fully, even by modern science. During the second half of the nineteenth century, without apparent rhyme or reason, yellow fever epidemics diminished in frequency and virulence--even before the inauguration of truly effective sanitation and quarantine

¹⁰⁵Picayune, August 10, 29, September 5, 12, 19, 26, October 3, 10, 17, 19, 22, 1847; N. O. Med. & Surg. Jour., V (September, 1848), 202.

¹⁰⁶Gardner's New Orleans Directory for 1861 (n.t.p.), 5.

measures and well before the discovery and control of the insect vector.

All observers present on the scene of destruction considered the visitation of 1847 the most widespread epidemic that had ever occurred in New Orleans. A New Orleans correspondent wrote in late October of that year: ". . . we have had a season of deep distress--& in all my experience I never saw the like."¹⁰⁷ According to Dr. Erasmus Darwin Fenner in his account of the outbreak, the older physicians of New Orleans agreed that the fever of 1847 was "the most extensive that ever prevailed" in that city, but considered it less "malignant" than that of 1841 or 1839. He cited statistics from Charity Hospital in support of the latter opinion, showing the case fatality rate as less than one-third in 1847, whereas ordinarily it ran as high as fifty per cent or more. An estimated 20,000 to 25,000 cases occurred in the city. The number of yellow fever deaths reported to the Board of Health by sextons of New Orleans cemeteries totaled 2,306, not including the 613 yellow fever interments reported from the Lafayette

¹⁰⁷Charles Harrod to Mrs. S. B. Evans, October 23, 1847, Nathaniel Evans Family Papers.

cemetery by late October. Fenner felt that 3,000 would not be far from the number who died of the pestilence in New Orleans and Lafayette.¹⁰⁸

The theory of blending fevers so prevalent at the time undoubtedly added to the ordinary difficulties of medical diagnosis and hence contributed to the problem of ascertaining the exact yellow fever mortality. A medical concept of the period explained various kinds of fevers as degrees of one basic fever. During the course of an epidemic, it was believed that the milder grades blended together and sometimes merged into the most malignant form, yellow fever. The editor of the New Orleans Medical and Surgical Journal noted the presence of all forms and degrees of fevers during the epidemic of 1847--mild intermittent, remittent, dysentery, congestive, and pernicious intermittent, as well as mild and grave yellow fever--which occasionally blended together in various combinations.¹⁰⁹ The terms employed refer to vaguely understood symptom-complexes rather than to specific diseases adequately diagnosed. Diagnoses based on superficial symptoms,

¹⁰⁸N. O. Med. & Surg. Jour., V (September, 1848), 203-206.

¹⁰⁹Ibid., IV (September, 1847), 274.

so similar in a great variety of disorders, could not always pin-point accurately the nature of a patient's illness. Many cases of mild or severe yellow fever might well have been listed on the records under some other vague appellation. The problems of diagnosis and nomenclature are well illustrated by a list of "fevers" compiled from the Board of Health mortality reports for 1847, which included twenty-seven different variations of fever, in addition to the yellow pestilence: "Fever," adynamic, ataxic, bilious, bilious remittent, congestive, idiopathic, gastric, hectic, icterodes, intermittent, intermittent pernicious, intestinal, malignant, malignant putrid, nervous, pernicious, pernicious congestive, puerperal, remittent, putrid, scarlet, scarlet malignant, traumatic, typhoid, typhoid congestive, and typhus.¹¹⁰ Of the more than 600 deaths attributed to the twenty-seven fevers, probably at least 200 should be added to the yellow fever total. On the other hand, it is somewhat less likely that deaths attributed to the Saffron Scourge were due to other causes, since so many physicians insisted on the appearance of the "black vomit" (which did not invariably

¹¹⁰Ibid., IV (January, 1848), 540-41.

occur) and other obvious symptoms of yellowness and involuntary hemorrhage before pronouncing a case yellow fever.

In discussing the extent of the 1847 outbreak, Dr. Fenner and others commented at length on the fact that no extensive epidemic had occurred since 1841 and that the population had steadily increased during the period, providing new supplies of unacclimated individuals. According to one estimate, over 20,000 Europeans had settled in New Orleans in the four or five years prior to 1847, and the immigration in 1847 was said to have been particularly heavy, consisting mainly of "the poorer sort." In addition, large numbers of discharged soldiers returning from the Mexican War stopped in New Orleans.¹¹¹ The editor of the New Orleans Medical and Surgical Journal noted that, although yellow fever was prevailing in Vera Cruz, very few cases had been brought from there to the Crescent City.¹¹² Adhering to the theory of local causation, he failed to comprehend that one imported case from that city might well

¹¹¹Ibid., V (September, 1848), 205; De Bow's Commercial Review, III (March, 1847), 250; Picayune, August 1, 1847.

¹¹²N. O. Med. & Surg. Jour., IV (September, 1847), 274.

have set off the explosion.

The poverty of the class most liable to the disease intensified the suffering and distress occasioned by the epidemic. The Howard Association, a benevolent society first organized during the epidemic of 1837 to afford relief to the indigent sick, served to alleviate in some measure the suffering of the destitute victims in 1847. Its members worked diligently that season, attending to the needs of about 1,200 yellow fever patients and providing sustenance for their families.¹¹³

Almost every year in the 1840's the pestilence attacked one or two points in Louisiana outside New Orleans. Only in two outbreaks, however, did it spread extensively. In 1843 it appeared in Baton Rouge, St. Francisville, Port Hudson, and Thibodaux; in 1847 it visited Lafayette, Carrollton, Algiers, Covington, Madisonville, Mandeville, Plaquemine, Baton Rouge, Bayou Sara, and Alexandria.¹¹⁴

¹¹³Fortier, Louisiana, I, 515; Picayune, September 5, 1847; Robinson, Diary of a Samaritan, 86.

¹¹⁴Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 844-902; Davis (ed.), Plantation Life in the Florida Parishes, 306; Fenner, "Report on the Epidemics . . . in the year 1853,"

The spread of yellow fever through the normal channels of trade and travel was undoubtedly facilitated by émigrés fleeing New Orleans, many of whom carried the seeds of pestilence with them. For example, during the epidemic of 1847, several German and Dutch families left New Orleans for Covington, hoping to escape the disease. Three persons among them became ill and died of the fever shortly after arriving in Covington. From that beginning yellow fever eventually spread to the townspeople, resulting in 160 to 180 cases, of which about ten died.¹¹⁵ One Covington physician said of the outbreak: "I do not think it genuine yellow fever."¹¹⁶ Perhaps he thought the "genuine yellow fever" should have resulted in a much higher case fatality rate.

The fever of 1847 prevailed to a considerable extent in the vicinity of New Orleans at Lafayette, Carrollton, and Algiers. Although some cases occurred in Plaquemine, Baton Rouge, and Bayou Sara, Dr. Fenner stated that the

loc. cit., 512; Corrine L. Saucier, History of Avoyelles Parish, Louisiana (New Orleans, 1943), 112; N. O. Med. & Surg. Jour., V (September, 1848), 216.

¹¹⁵N. O. Med. & Surg. Jour., IV (November, 1847), 409.

¹¹⁶Ibid., V (September, 1848), 216.

disease did not assume epidemic proportions in those towns.¹¹⁷ Alexandria, on the other hand, suffered a rather serious attack. On October 9 the editor of the Alexandria Red River Republican attempted to discount the severity of the outbreak. In declaring an epidemic in progress about ten days before, the physicians of Alexandria had alarmed the populace, he complained, and induced many persons to leave town. Admitting that a number of cases had occurred, especially among the destitute, he considered the fever rather mild in its effects and expressed the hope that no more cases would appear. Undue optimism failed to affect the activities of the pestilence, which steadily increased its ravages. In mid-October the editor described the town as gloomy and desolate; all those able to do so had removed themselves and their families from the scene. Finally, by early December the disease had completely run its course in Alexandria.¹¹⁸

If epidemic yellow fever resulted in part from local unsanitary conditions, as it was widely believed, sanitary

¹¹⁷Ibid., 204, 213.

¹¹⁸Alexandria Red River Republican, October 9, 16, December 4, 1847.

reform would seem the logical approach to the problem. During the first half of the nineteenth century boards of health existed intermittently in New Orleans, several created by the state, the others by the city council. Not one operated with any degree of efficacy. Dependent upon a generally uncooperative city council for funds and legal enforcement of health regulations, the boards, no matter how enlightened, could scarcely inaugurate a program of public health. Although willing to appoint a board, the council was seldom willing to appropriate funds for its use or to effect its suggestions. The prevailing laissez-faire philosophy provided little basis for positive action by such a bureau. Public health had not yet become a matter of public concern, and the highly individualistic citizen of early nineteenth century New Orleans considered it his inalienable right to clean his premises if and when he chose. The development of a public health consciousness required still more time, more deaths, and more reformers.

A half-century of visitations established for yellow fever an accepted role in the Crescent City as an unfortunate but inevitable scourge to be endured, but one which limited itself fortunately to two or three major

flagellations per decade. As the disease carried off hundreds of victims, a fairly constant stream of immigration furnished more than sufficient replacements, and the population of New Orleans continued to grow in spite of the attendant dangers. Although the business season suffered a temporary postponement during epidemic years, the vigorous activity which followed each time rapidly dimmed the memory of the earlier distress. As the population increased and the fever expanded its field of activity, raising the death count year by year, acclimated New Orleanians experienced a diminishing sensitivity to its ravages. The definition of a mild epidemic changed as the visitations became increasingly severe. For example, the outbreak of 1843, claiming only about 700 victims, was a moderate one in comparison with the yellow fever mortality in 1841, while in 1817 a mortality of 800 had constituted a major disaster. The worse the epidemics became, the more loudly editors, physicians, and others protested that New Orleans was the healthiest city in the Union except during epidemic years. Unfortunately, that claim was not true at all. The delusion regarding the salubrity of the Crescent City, while generally accepted within the city itself, failed to gain credence in other parts of the

country. Regardless of its protests to the contrary, New Orleans, largely because of the Saffron Scourge, had acquired for itself a widespread reputation as the "Necropolis of the South."

Medical men throughout the nineteenth century, and earlier, continually attempted to analyze and explain the nature, causation, and transmission of the yellow pestilence. Unaware of the insect vector, physicians found it difficult to account for the unpredictable spread of the fever; its vagaries seemed to defy all attempts at clear analysis. Ample evidence existed to prove almost any point of view, depending upon what evidence one chose to select. Under the circumstances widespread controversy developed over the various possible answers to problems which remained essentially unsolved: Was the fever contagious or non-contagious, imported or locally caused? What was its relationship to other fevers? What form of treatment proved most effective? Why did the disease appear in certain places rather than others, and why in some years did it prove more malignant than in others? Medical controversy until the late nineteenth century resembled a philosophical debate in which the participants moved deductively from premise to premise, committed one

logical fallacy after another, leaped to hasty conclusions, rationalized their own particular predilections, and in the process generated more heat than light.

On a subject about which no agreement existed among medical men, laymen felt equally qualified to argue and make pronouncements. In terms of the limited medical knowledge of the period, yellow fever could only remain a puzzle with which to exercise the intellect, a puzzle with several basic pieces missing. Until the discovery of the cause of transmission, little could be done toward preventing the recurrence of the disease, and at the close of yellow fever's first half-century in New Orleans, men had little more understanding of the pestilence than when it had first occurred.

YELLOW FEVER MORTALITY IN NEW ORLEANS
1796-1847

Year	Estimated Deaths	Population (Approx.)
*1796	250 to 400	6,000 to 8,000
1797	?	
1798		
*1799	No record	
1800		
1801		
1802	?	
1803		
*1804	No record	
1805		
1806		
1807	?	
-1808		
*1809	No record	
1810	?	
*1811	500	18,000
1812		
1813		
1814	?	
1815		
1816		
*1817	800	24,000
1818	115	
*1819	425 to 2,000	26,000
1820	400	
1821	7+	
*1822	800 to 2,000	32,000
1823	1+	
1824	108	
1825	59+	
1826	5+	
1827	109+	
1828	130+	
*1829	900	48,000
1830	117+	
1831	2+	
1832	400	
*1833	1,000	58,000
1834	95+	

(Continued)

Year	Estimated Deaths	Population (Approx.)
1835	284+	
1836	5+	
*1837	1,300	68,000
1838	17+	
*1839	800	74,000
1840	3+	
*1841	1,325 to 1,800	79,000
1842	211+	
-1843	500 to 700	84,000
1844	148	
1845	2	
1846	100 to 160	
*1847	2,300 to 3,000	109,000

*Major epidemics.

+For many years, the only figures available for yellow fever mortality in the city are the figures for yellow fever deaths in Charity Hospital, indicated by a plus after the number. Presumably there were other deaths in New Orleans in private practice during those years.

DISTRIBUTION OF YELLOW FEVER IN LOUISIANA OUTSIDE OF NEW ORLEANS,
1811-1847*

	1811	1817	1819	1820	1821	1822	1823	1826	1827	1828	1829	1831	1837	1839	1841	1842	1843	1846	1847
Alexandria			X			X	X		X			X	X	X					X
Algiers																			X
Baton Rouge		X	X	X	X	X			X		X		X				X		X
Bayou Sara														X					X
Carrollton																			X
Covington																			X
Donaldsonville							?		X					X					
Franklin														X					
Lafayette (N.O.)																			X
Mandeville																			X
Madisonville																			X
Natchitoches									?					X					
New Iberia														X					
Opelousas								X		X	X		X	X		X			
Plaquemine													X	X					X
Port Hudson														X	X		X		
St. Francisville	X	X	X			?	X		X	X	X			X			X	X	
St. Martinville														X					
Thibodaux											X			X			X	X	
Washington													X	X					

*This chart does not represent an all-inclusive view of yellow fever's appearances in Louisiana. To compile such a chart on the basis of available records would be impossible. It is designed merely to indicate at least the major points affected by the disease during this period, and by no means to exclude others not listed where yellow fever might well have occurred on many occasions.

CHAPTER III

THE GREAT EPIDEMICS OF THE FIFTIES:

1853, 1854, 1855, 1858

In a series of visitations spread over a century of Louisiana's history, the Saffron Scourge achieved a peak of virulence in the 1850's, striking four severe blows in the space of six years: in 1853, 1854, 1855, and 1858. The survivors scarcely had time to forget one epidemic before the appearance of still another. In the four major attacks of the 1850's, the pestilence swept away over 18,000 persons in New Orleans alone, a sufficient number to populate several small towns.

Between the extensive outbreak of 1847 and that most malignant of all epidemics in 1853, New Orleans was not exempt entirely from the fever. During that five-year period, the disease claimed a total of more than 2,000 lives. In the absence of a violent epidemic, however, New Orleanians allowed themselves to hope and then to believe that yellow fever was no longer a disease to be feared.

In May of 1852 the editor of the New Orleans Medical and Surgical Journal confidently asserted that "the Yellow Fever--the dread of the stranger and sojourner in our midst, has long since been banished [from] the city. . . ." Later, in another editorial, he noted a considerable improvement in the health of New Orleans and attributed that happy development to the recent attention given to street cleaning, paving, and the drainage of swamp land surrounding the city. Five years had passed, the editor observed, without the occurrence of epidemic yellow fever, and he felt confident that the disease could be completely eliminated by a "crash" program of sanitary improvements.¹

The ideal of cleanliness and the reality of effecting such a condition in New Orleans remained unreconciled, and in the summer of 1853, with frequent rains and the sun's excessive heat, the sanitary condition of the city steadily worsened. The Crescent City newspapers complained indignantly of the filthy streets and repeatedly denounced the city government and the Street Commissioner for neglecting their duties. In view of the unsanitary

¹N. O. Med. & Surg. Jour., VIII (May, 1852), 819; IX (November, 1852), 415-16.

condition of the city, Dr. Erasmus Fenner thought it rather strange that anyone should look beyond New Orleans for the cause of the pestilence. "Indeed it was so bad," said Dr. Fenner, "that if it had given rise to Egyptian Plague instead of yellow fever, it ought not to have surprised anyone. . . ."2

In May of 1853 the earliest cases appeared and were pronounced yellow fever by the attending physicians at Charity Hospital, but other physicians, who also viewed the cases, disagreed with the original diagnosis. According to Dr. Fenner, the discussion and debate proceeded along these lines:

Some thought the subjects were too yellow, Others that the yellowness was not exactly of the right hue . . . some said what was pronounced black vomit was not dark enough, others that it was too black; others, again that it was not black vomit because it was of a reddish hue; whilst others, admitting a resemblance, still could not find 'the old fashioned Black Vomit.' Some would not admit the cases were Yellow Fever, because they occurred 'too early in the season,' --they had never known Yellow Fever to break out so early in this city, and therefore did not think it possible.

Finally, on June 10, an "unquestionable case" entered Charity Hospital; an Irish girl from Tchoupitoulas Street

²Fenner, Epidemic Yellow Fever, 10-15.

who turned quite yellow, provided large quantities of "unmistakeable, old-fashioned, coffee-grounds black vomit," and thereby ended the medical controversy. "The skeptics all gave it up after seeing this," said Fenner. From late May and early June the fever made steady progress, but received little publicity until mid-July. New Orleans had no Board of Health at the time. Lacking sufficient authority to enforce its regulations and denied support by the city fathers, the last board had adjourned sine die in 1852, leaving only a secretary. Weekly interment reports then were issued under the direction of the mayor and the secretary of the late board. "This was all the correct information that was published," Fenner stated, "and even this was complained of by some who thought it better to suppress the truth than cause a panic."³

The Crescent City journals published the interment lists and an occasional report from Charity Hospital, but avoided commentary on the disease. Meanwhile the death count steadily increased. Finally on July 13 the Orleanian admitted the existence of yellow fever in the city but discounted its importance. On the same day, several

³Ibid., 15-25, 35; Picayune, June 28, 1853.

newspapers printed a notice calling a meeting of the Howard Association, the organization which ministered to the needs of the poor during an epidemic. This should have furnished a clue to many readers that the situation was a serious one. By July 16 the pestilence had claimed over 300 lives, and as the word spread through the city along with the disease, citizens fled the scene by the thousands. During the week ending July 23, more than 400 persons died of the fever.⁴

Under pressure from the newspapers, which at last had begun to comment on the situation, and urged on by the Mayor, the City Council finally appointed a temporary board of health on July 25. Within two weeks' time, the board had established four infirmaries for the indigent sick and two temporary asylums for children orphaned by the epidemic.⁵ At this point, horrible scenes of suffering and death could be witnessed throughout the city. Entire families fell victim to the raging pestilence, and "tenants for the cemeteries" multiplied faster than graves could be provided. In order to speed up the process, the grave-

⁴De Bow's Commercial Review, XV (December, 1853), 597-611.

⁵Picayune, July 26, August 6, 1853; De Bow's Commercial Review, XV (December, 1853), 613-14.

diggers soon resorted to long ditches, eighteen to twenty-four inches deep, into which they tossed the coffins and threw on a "few shovelfuls of dirt." The daily rains soon washed away this thin covering and bared the coffins to the blistering heat of the sun which followed each brief downpour. Frequently the putrefying bodies burst through the hastily-built coffins and filled the air "far and near, with the most intolerable pestilential odors."⁶ In August the mortality reached incredible heights: over 900 the first week, 1,200 the next, and two full weeks of over 1,300 each. Describing the plague-stricken community in August, one observer wrote: "The whole city was a hospital, and every well man, woman, and child were instrumental, in one way or another, in relieving the sick."⁷

The streets were deserted except for "the hasty pedestrian on an errand of mercy" or physicians charging rapidly along in their gigs. Funeral trains in the morning and the evening lined the roads to the cemeteries.

⁶New Orleans Daily Crescent, August 11, 1853; De Bow's Commercial Review, XV (December, 1853), 614, 620-21.

⁷Fenner, Epidemic Yellow Fever, 38-44; Robinson, Diary of a Samaritan, 150.

But the usual happy noises of busy activity, the sounds of shoppers, sellers, and workers, had been strangely silenced by death, disease, or fear. The wharves were all but deserted; virtually all business had ceased, and most of the shops were closed down.⁸

In the last week of July, after delegating their powers to the Finance Committee and creating a temporary board of health, the City Council had adjourned until October, leaving the city without a government for two months in the midst of a disaster. Some of the council members fled to places of safety in the North, some to resorts along the Gulf where the epidemic pursued them; some stayed on and extended their services during the crisis. One New Orleans newspaper commented disgustedly: "What a humiliating position! A City Council, in the midst of an unprecedented epidemic, adjourning for their own health, convenience, and comfort. . . . What a burlesque on municipal government!"⁹

Even the native and long-resident New Orleanians

⁸De Bow's Commercial Review, XV (December, 1853), 615; Robinson, Diary of a Samaritan, 150-52.

⁹De Bow's Commercial Review, XV (December, 1853), 609-11, 620.

became alarmed during the terrible month of August. Up to this point they had felt relatively secure in believing that only the newcomer, the imprudent, and the unclean fell victim to the raging fever. When several of New Orleans' oldest citizens were swept away by the pestilence, a new dread seized the city. Even the French inhabitants, always the last to fear the disease, became alarmed. Editors of the French newspapers attributed the fever's increasing virulence to the noxious effluvia emanating from the gutters and from the graveyards filled with rotting, half-buried corpses.¹⁰

In mid-August the Mayor, on the recommendation of the Board of Health, ordered that 400 rounds of cannon be fired daily at sunset in the various public squares of the city in an attempt to purify the atmosphere and clear away the disease. Toward the same end, he ordered the burning of barrels of tar in the streets and in the cemeteries at nightfall. Since the noise was found to be disturbing as well as injurious to the sick, the cannon firing was discontinued after two days, but the tar-burning program remained in effect for some time.¹¹ The roar of the guns

¹⁰Ibid., 621.

¹¹Ibid., 626-27; Fenner, Epidemic Yellow Fever, 38.

and the fires in the night, together with the horrors of the creeping pestilence, which spread so insidiously and so mysteriously, must have presented a truly unnerving spectacle to those who were forced to endure it.

In addition to the four infirmaries established by the Board of Health, the Howard Association opened four more temporary hospitals for the indigent sick and one especially for convalescents. As all the public schools had been closed for the duration of the epidemic, the Howards obtained the Washington School building on Magazine Street for use as a temporary hospital. A portion of the school house became a place of refuge for children who had lost both parents to the fever. Contributions to the Howard Association poured in from all over the country to the amount of over \$200,000. The long list of contributors from Washington, D. C., included the name of President Franklin Pierce. Before Baton Rouge fell victim to the disease, a deputation of citizens from that city came to aid the New Orleans Howards in relieving the sick.¹²

The week ending August 27 had witnessed the peak of

¹²De Bow's Commercial Review, XV (December, 1853), 626, 633; Fenner, Epidemic Yellow Fever, 42-43.

the epidemic. Yellow fever had claimed almost 1,400 victims in the space of seven days. By September 1 Dr. Fenner reported that the epidemic was rapidly declining, "deaths from it now only amounting to about 100 a day." Through September and early October, the weekly death toll decreased steadily: 700, 400, 200, 125, 85, 42. By October 31 the Board of Health felt safe in declaring the epidemic at an end and assured absentees and strangers a safe entry to New Orleans.¹³ A few scattered cases occurred after that date, but for all intents and purposes the crisis was over, and the city could begin the work of regeneration for the delayed business season, while physicians could start the task of explaining New Orleans' most malignant plague, which also had made great ravages throughout the entire Gulf States area.

Writing soon after the epidemic, Dr. Bennet Dowler estimated a yellow fever mortality of 8,400 in New Orleans alone. "The bloodiest battle-fields of modern-time scarcely can compare with the New Orleans epidemic of 1853," said Dr. Dowler, "which destroyed five times more

¹³Fenner, Epidemic Yellow Fever, 45-47.

than the British Army lost on the field of Waterloo."¹⁴ Created at the close of the epidemic to investigate the facts of the siege, the Sanitary Commission set forth a total of 8,101 yellow fever fatalities. Dr. Edward H. Barton, head of the commission, made an extensive statistical study of the epidemic. He estimated a total population of almost 159,000 in New Orleans in 1853, including some 5,000 transients. Supposedly, almost one-fourth of the population fled when the Saffron Scourge arrived, leaving approximately 125,000 in the Crescent City during the visitation. Hence, the fever claimed about one of every fifteen persons remaining in the city. A total of approximately 29,000 cases and 8,000 deaths indicated a case fatality rate of almost twenty-eight per cent.¹⁵ On the other hand, Dr. Fenner estimated only about 100,000 persons in the city during the epidemic, of which about eight per cent, or one in twelve, died of the fever; and of the total population in the city at the time, over

¹⁴Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 31, 60.

¹⁵Edward Hall Barton, The Cause and Prevention of Yellow Fever, Contained in the Report of the Sanitary Commission of New Orleans (Philadelphia, 1855), 41-44.

one-fourth suffered attacks.¹⁶

The pestilence of 1853 covered a more extensive area in Louisiana, and the South generally, than ever before. According to Dr. Fenner, it attacked every town along the Mississippi River as far north as Napoleon (Arkansas) at the mouth of the Arkansas River, practically every village in Mississippi and Louisiana south of Vicksburg, and almost every plantation along the Mississippi River south of Natchez.¹⁷ Pensacola, Mobile, Biloxi, Galveston, and Houston also experienced severe visitations, and in each case the fever spread to the interior where it had never appeared before. It seemed to rage with equal force in clean and unclean areas, in high and dry regions and low and wet localities, in piney woods as well as filthy streets, a phenomenon which posed new problems for medical theorists.¹⁸ Some held firm to the concepts of local

¹⁶Fenner, Epidemic Yellow Fever, 71-72.

¹⁷Fenner, "Report on the Epidemics . . . in the year 1853," loc. cit., 424.

¹⁸De Bow's Commercial Review, XV (December, 1853), 631-33; History of the Yellow Fever in New Orleans, during the Summer of 1853 . . . by a Physician of New Orleans. . . (Philadelphia & St. Louis, 1854), 30.

causation and "epidemic constitution of the atmosphere" in explaining the fever's origin and transmission. Others were converted to the idea of importation, if not contagion itself.

In many Louisiana towns where the first case was directly traceable to a previous center of infection, it was difficult to avoid the conclusion that the disease had been imported from New Orleans, or from a neighboring town. There were, however, just enough exceptions where contacts had failed to spread the fever from one town to another, or where an imported case failed to touch off an epidemic, to keep the local causationists in business. Points within the state of Louisiana outside of New Orleans where the fever appeared in 1853 included Algiers, St. John Baptiste, Donaldsonville, Plaquemine, Baton Rouge, Bayou Sara and St. Francisville (and nearby Clinton), Vidalia, and Lake Providence along the Mississippi River; Alexandria, Natchitoches, Grand Encore, and Shreveport on the Red River; Cloutierville on Old River, a branch of the Red River; Pattersonville, Franklin, Centreville, and Washington on Bayou Teche, together with Opelousas only a few miles away; Thibodaux on Bayou La Fourche; Trenton on the Ouachita River; Covington and Madisonville across Lake

Pontchartrain from New Orleans; and several other towns in close proximity to one of the above centers.¹⁹

There is every indication that the pestilence of 1853 raged even more severely in some of the small towns than it did in New Orleans itself. In Baton Rouge, for example, out of a population of about 2,000, according to Bennet Dowler, about 200 died of the fever; a later estimate set the figure as high as 400.²⁰ In early September a report from Thibodaux described a desolate situation there. The town had been largely abandoned, and almost every person remaining had the fever. In one day, twenty-two persons had fallen victim to the fever and about 160 new cases had occurred. According to Dowler's figures, yellow fever claimed nearly 150 persons, or fifteen per cent of the Thibodaux resident population.²¹ In his

¹⁹Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 844-902; De Bow's Commercial Review, XV (December, 1853), 631-63; Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 26-27.

²⁰Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 26; John McGrath, Scrapbook (Louisiana State University Archives, Baton Rouge), 32 left, 39 right.

²¹De Bow's Commercial Review, XV (December, 1853), 631-32; Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 26.

well-known account of travels through "The Cotton Kingdom," Frederick Law Olmsted mentioned the epidemic in commenting on Alexandria, which city he visited in December of 1853. He noted that the community ordinarily had a population of 1,000, but had been almost entirely deserted by its citizens when the pestilence struck. Of some 300 who had remained in town, he was told that 120 had died.²² Dr. Dowler estimated that one-fifth to one-sixth of Alexandria's population had been wiped out by the disease and that Lake Providence, where yellow fever had never appeared before, had lost over half its small population.²³

An experience such as the Great Epidemic of 1853 could scarcely be forgotten by those who lived through it, not even by New Orleanians long accustomed to epidemic disease. This time, however, no intermission followed, no summer or two in which the memory of epidemic yellow fever might begin to fade. The very next year the disease again appeared in New Orleans and carried off almost 2,500

²²Frederick Law Olmsted, The Cotton Kingdom, edited by Arthur M. Schlesinger (New York, 1953), 278.

²³Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 27.

additional victims.²⁴ Although a rather destructive epidemic in terms of fatalities, the pestilence of 1854 claimed less than a third of the number lost in 1853. A resident of New Orleans wrote in his diary in September: "This is considered among the old residents one of the bad 'epidemic years' yet coming after the frightful pestilence of last summer it seems to excite but little attention--such is the power of 'contrast.'" In early November he noted that "the epidemic just closing is pronounced the worst that has ever existed in New Orleans except those of 1847 and 1853. . . ." ²⁵

Not once throughout the entire season did the Picayune admit the existence of a full-scale outbreak. While publishing the weekly interment figures and Charity Hospital reports, the editor repeatedly commented on the freedom of the city from anything resembling epidemic disease, apparently taking the disaster of 1853 as the new standard for epidemics.²⁶ And by comparison to the

²⁴Barton, Cause and Prevention of Yellow Fever, comparative table, preceding p. 1.

²⁵Thomas K. Wharton, Diary (Louisiana State University Archives, Baton Rouge), September 21, November 6, 1854.

²⁶Picayune, August 4-December 4, 1854.

epidemic of 1853, the visitation of 1854 was actually a rather mild one. According to a report in the New Orleans Medical and Surgical Journal, "in no former epidemic for eighteen years has yellow fever yielded more readily to timely medication."²⁷

The City Council reassembled in early October--after their recess during the sickly season. Sardonicly, the Mayor informed the council members that in the absence of a Board of Health during the epidemic, he had been unable to obtain any information to present to them on the subject of the fever. However, he told them that it "was similar to the awful calamity of the previous year." In regard to the "lamentable inefficiency" of a city government which failed to act in the interest of public health, one citizen of New Orleans felt that "the ever patient, enduring public has had enough of it--a change must come, and that soon."²⁸

Even as the pestilence of 1854 was considerably less virulent in New Orleans than its predecessor, so was its spread through the state less extensive. It did,

²⁷N. O. Med. & Surg. Jour., XI (November, 1854), 416.

²⁸Wharton Diary, October 4, 1854.

however, revisit Bayou Sara, Franklin, Pattersonville, Washington, Thibodaux, Alexandria, and Cloutierville. Places apparently experiencing yellow fever for the first time included Jeanerette and Judge Baker's plantation in St. Mary Parish and three small settlements in Plaquemine Parish below New Orleans: Buras Settlement, Point a la Hache, and Jesuit's Bend.²⁹

The first two major epidemics of the 1850's resulted in an intensified investigation of the facts relating to yellow fever, its cause, transmission, and possible prevention. Thousands of words filling hundreds of pages poured forth from the pens of physicians, newspapermen, and others on the subject of the disease. With so much new experiential data, the old theoretical fight became more intense than ever. There were those who still believed the fever to be non-contagious, locally-caused, and spread by that indefinable essence, the "epidemic constitution of the atmosphere." Others had come to believe that the disease was imported to New Orleans from Latin America and transmitted elsewhere, if not by

²⁹Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 844-902; Picayune, September 29, 1854.

infected persons then by goods or baggage infected in some yet unknown manner.

The old attitude of fatalistically accepting the inevitable recurrence of the pestilence received a fairly severe blow from the unparalleled impact of the disease in 1853. In the midst of the fever's worst ravages, the Picayune published a letter to the editor expressing the beginning of a change in public opinion. The writer complained that New Orleans had suffered too long without exerting any real effort to thwart the recurring evil. Aware of the fact that many medical men ridiculed the idea of quarantine measures and that commercial interests opposed any such restrictions, he also knew, on the other hand, of reliable physicians who favored inspection and quarantine of incoming vessels as a possible means of holding out yellow fever. Furthermore, he noted, "public opinion is daily growing more and more strong in favor of such . . . regulations."³⁰ The New Orleans Picayune presented a steady stream of editorials demanding both quarantine and sanitation measures against the Saffron Scourge. While the importationists and the local

³⁰Picayune, August 11, 1853.

causationists carried on the interminable argument, the two proposed weapons against yellow fever might be tested. "Amid all the uncertainty . . . we think it may safely be assumed, that either they [the epidemics] are of local generation, or they are of foreign importation; or they are both," the editor reasoned. Hence, both internal and external sanitary measures should be established "to meet all the postulates."³¹

The Louisiana legislature considered the quarantine issue early in 1854, but reaching no agreement, postponed the final resolution of the problem until the following session. The epidemic visitation which occurred in the summer of 1854 strengthened the public demand for protective measures, and finally on March 15, 1855, the lawmakers passed "An Act to Establish Quarantine for the Protection of the State," therewith creating a board of health to administer the quarantine--Louisiana's first State Board of Health and the first state board in the country as well.³²

³¹Ibid., September 25, 1853.

³²Ibid., March 9, 14, 18, 19, 1854; "An Act to Establish Quarantine for the Protection of the State," Acts Passed by the Second Legislature of the State of Louisiana,

Unfortunately, Yellow Jack arrived in New Orleans in the summer of 1855 before the Board was able to make all the necessary arrangements for establishing the quarantine stations.³³ For the third time in three successive years the Crescent City experienced a yellow fever epidemic. In August the editor of the New Orleans Medical and Surgical Journal wrote: "The Yellow Fever of 1853-4-5, a triune or triennial epidemic, though temporarily suspended during the winter season, rages still in New Orleans." And, he added: "The illusory hopes and flattering prognostications which many persons indulged, that the unparalleled epidemic of 1853 had exhausted itself or

at Its Second Session . . . 1855 (New Orleans, 1855), 471-77; see also Gordon E. Gillson, "The Louisiana State Board of Health: The Formative Years" (Ph.D. Dissertation, Louisiana State University, Baton Rouge, 1960).

³³Report of the Board of Health of the State of Louisiana to the Honorable Senate and House of Representatives [for 1855] (New Orleans, 1856), 10. The reports of the Louisiana State Board of Health, which vary slightly in title form from year to year, will be cited hereinafter as Report of the Louisiana State Board of Health with the year for which the report was made.

The Act of 1855 provided for three quarantine stations: down the Mississippi River from New Orleans; at the mouth of the Atchafalaya River; and at the Rigolets, the entrance from the Gulf to Pontchartrain.

rather the food on which it fed, have ended in disappointment." The high point of the epidemic occurred in the third week of August, when the fever claimed almost 400 victims. In gradually building up to that point from late June, the fever had caused a total mortality of almost 1,300, and in its gradual decline from late August to late October, it destroyed approximately 1,300 more. At the close of the epidemic the editor of the New Orleans Medical and Surgical Journal commented rather poetically on the "pestilential storm" which once again had swept through New Orleans. In spite of all, he asserted proudly, "The beleaguered city, after a three years' pestilential siege, stands forth like a scarred veteran, yet strong, hopeful, undismayed, unconquered and ready to meet the inexorable decrees of fate quietly and without retreating."³⁴ According to the report of Louisiana's first State Board of Health, the Crescent City had suffered a total loss of 2,670 yellow fever deaths that season.³⁵

A resident of New Orleans, writing in his diary in

³⁴N. O. Med. & Surg. Jour., XII (September, 1855), 285; XII (November, 1855), 432.

³⁵Report of the Louisiana State Board of Health for 1856, 25.

late September of 1855, expressed the opinion that the "worst feature" of the epidemic was "its general diffusion thro' this State and lower Mississippi." He noted that in previous years "the timid found a safe retreat from the scourge of the city in the country towns and on the Plantations of the coast--[but] now the country is no longer safe." Since the epidemic of 1853, "the whole Southern portion of the United States seems to have become the home of 'the fever,'" he wrote, ". . . particularly . . . along the water courses and in the marshy Bays and inlets of the sea and Gulf Coasts."³⁶ In spreading through the state of Louisiana the pestilence of 1855 touched more points than the previous one of 1854, but neither could rank with the outbreak of 1853 in extensiveness. The 1855 fever extended up the Mississippi to Baton Rouge, Plaquemine, and Point Coupee Parish; up the Red to Alexandria; all along the Ouachita and Black rivers; and to various points in the southern part of the state, including Pattersonville, Centerville, and St. Martinville on the Teche, and also New Iberia.³⁷

³⁶Wharton Diary, September 30, 1855.

³⁷Toner, "Reports Upon Yellow Fever," loc. cit.,

The next two years passed without epidemic incident. According to the Board of Health reports, only 74 yellow fever deaths occurred in New Orleans in 1856, and only 199 in 1857.³⁸ In the summer and fall of 1858, however, the Crescent City experienced another violent epidemic, out-ranked only by the great visitation of 1853.

In the August issue of the New Orleans Medical News and Hospital Gazette, the editor reported that the fever of 1858 had first appeared in the middle of June. At that point, he said, it was yet impossible to predict its future progress. Almost entirely confined to the working classes, especially along the waterfront, the disease had not yet become "anything like epidemic." But, he noted, the mass exodus from New Orleans was already under way. In the September issue the editor admitted the impossibility of accurately predicting the course of yellow fever "until more is known of the coming and going of this terrible scourge." An epidemic was clearly in progress in the city

369-73; Augustin, History of Yellow Fever, 844-902; Picayune, September 20, 25, 1855.

³⁸Report of the Louisiana State Board of Health for 1856, 34; New Orleans Medical News and Hospital Gazette, V (March, 1858), 42.

and had been for some time.³⁹

In early August of 1858 a New Orleanian wrote in his diary: "The subject of Yellow Fever is beginning to excite attention. The rapid increase of deaths in the Hospital . . . shows its epidemic character, and there is no doubt that it bears the genuine West India type."⁴⁰ He continued to write of its increasing prevalence, noting that "the fever this year is of a very vicious type." In late August he commented on the extent of the epidemic: ". . . it is everywhere!--in the houses of the rich and the houses of the poor." This diarist, a keen observer, also recorded his impressions of the city, which seemed "subdued and still--more like a village in summertime as far as human action is concerned."⁴¹

In late September and early October, the fever continued to carry off hundreds of victims weekly. In spite of repeated warnings in the newspapers, a steady stream of strangers poured into the city, "furnishing fresh food to

³⁹N. O. Med. News & Hosp. Gaz., V (August, 1858), 390-91; V (September, 1858), 481.

⁴⁰Wharton Diary, August 6, 1858.

⁴¹Ibid., August 30, September 3, 1858.

the destroyer." Finally, by mid-November the worst was over.⁴²

Although disseminated widely through the South, apparently the fever of 1858 did not attack Louisiana extensively outside of New Orleans. It seems to have appeared only in Plaquemine, Baton Rouge, Algiers, Gretna, McDonoughville, and Franklin; however, there may have been outbreaks in many other small towns which were simply not recorded in the medical journals and larger newspapers. The Saffron Scourge hit many points outside Louisiana that year, including Galveston, Houston, Brownsville, Pass Christian, Biloxi, Vicksburg, Natchez, Woodville, Mobile, Savannah, and Charleston.⁴³

Having failed to prevent a highly malignant epidemic, Louisiana's quarantine system came under attack from many quarters in 1858. The quarantine act had enemies from its very inception, particularly among the shipping and commercial interests who opposed its economic effects and physicians who adamantly insisted that yellow fever was

⁴²Picayune, October 10, November 16, 23, 1858.

⁴³Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 844-902; N. O. Med. & Surg. Jour., XV (November, 1858), 811.

not, and could not be, imported. The epidemic of 1858 undoubtedly turned many New Orleanians against quarantine, many who had counted on the new system to protect the city from yellow fever's ravages. The editor of the New Orleans Bee in September of 1858 criticized the system as both useless and costly and insisted that the disease was obviously "of indigenous origin."⁴⁴ There were two possible conclusions at this point: either yellow fever was an imported disease, and the quarantine system had not been effective in screening it out; or yellow fever was of native origin, and quarantine an unnecessary expense.

The Board of Health chose the first alternative as the explanation for the epidemic of 1858. Insisting that the fever was an imported disease, the Board's Report for 1858 stated that quarantine failed because legislative amendments to the original act had rendered it ineffective. In amending the act in March of 1858, the legislature had reduced the detention period of those vessels coming from infected ports which presented a clean bill of health on arrival. Denouncing this amendment as a concession to commercial interests, the Board of Health felt that it

⁴⁴Bee, September 4, 1858.

seriously compromised the practicality of the original act. Furthermore, they recommended a series of new amendments to increase the effectiveness of the quarantine program.⁴⁵

The epidemic of 1858, together with the three other serious visitations in the 1850's, represents the climax of yellow fever's activities and marks a turning point in its history in Louisiana. The Great Epidemic of 1853, so devastating in its effects, so widespread in extent, and followed by three more outbreaks within a five-year period, led to a revived interest in an old issue relating to yellow fever, an issue which had never been solved, although it had been shelved from time to time: what exactly was the cause of the yellow pestilence, and how could it be prevented? Was it a gaseous substance spontaneously generated from filth and spread through the atmosphere? Influenced by heat and wet weather? A specific living entity transmitted from person to person? Preventable by sanitation, by quarantine, by both? Or what? No one knew. Hundreds of questions could be posed; none could be

⁴⁵Report of the Louisiana State Board of Health for 1858, 20, 28-32; "An Act Supplementary to an Act entitled 'An Act relative to Quarantine,' " Acts passed by the Fourth Legislature of Louisiana, at its First Session . . . 1858 (Baton Rouge, 1858), 187-89.

answered with any finality. One New Orleanian, writing in 1853, summed up the problem in this manner: "The truth is, that nothing--absolutely nothing--is known of its [yellow fever's] cause, although it has been studied attentively for more than a century, with all the aids that modern science could afford."⁴⁶ The battle between local causationists and importationists raged fiercely through the decade of the fifties. Although a quarantine system had been effected in 1855, and continued with various modifications from then on, by no means was there anything like a unanimity of opinion of the subject. For the remainder of the nineteenth century, the issue of quarantine provided a continual topic for debate. At any rate, nothing short of absolute nonintercourse during the hot months, or a long detention period for vessels, together with a fumigation process thorough enough to destroy the yet unsuspected mosquito, could have proved effective in holding out the disease. Nevertheless, the new State Board of Health, operating under tremendous handicaps, tried desperately to effect measures designed to preserve the health of the Crescent City.

⁴⁶De Bow's Commercial Review, XV (December, 1853), 632.

The State Board of Health itself, created originally to administer the quarantine system, was, in a sense, a by-product of the Great Epidemic, and with the addition of further duties and powers, would in time evolve into a vital state institution. Furthermore, the epidemics of the fifties shocked the people of New Orleans into a re-evaluation of their mortality statistics, which would ultimately result in a great awakening on the subject of the city's insalubrity. Still the sanitary revolution was a long time coming.

YELLOW FEVER MORTALITY IN NEW ORLEANS,
1848-1858

<u>Year</u>	<u>Estimated Deaths</u>	<u>Population (Approx.)</u>
1848	872	116,000
1849	769	
1850	107	
1851	17	
1852	456	
*1853	7,849 to 8,400	154,000
*1854	2,300 to 2,500	157,000
*1855	2,670	159,000
1856	74	
1857	199	
*1858	4,855	166,000

*Major epidemics.

DISTRIBUTION OF YELLOW FEVER IN LOUISIANA
OUTSIDE OF NEW ORLEANS, 1848-1858*

Places	1852	1853	1854	1855	1858
Alexandria		X	X	X	
Algiers		X			X
Baton Rouge		X		X	X
Bayou Sara		X	X		
Carrollton		?		X	
Centerville		X		X	
Clinton		X			
Cloutierville		X	X		
Covington		X			
Donaldsonville		X			
Franklin		X	X		X
Grand Encore		X			
Gretna		?			X
Harrisonburg				X	
Lake Providence		X			
McDonoughville					X
Madisonville		X			
Natchitoches		X			
New Iberia				X	
Opelousas		X			
Paincourtville				X	
Pattersonville		X	X	X	
Plaquemine		X		X	X
Plaquemines Parish			X		
Point Coupee Parish				X	
St. Francisville		X			
St. John Baptiste		X			
St. Martinville				X	
St. Mary Parish			X		
Shreveport		X			
Thibodaux		X	X		
Trenton		X		X	
Vidalia		X			
Washington	X	X	X		
Waterproof				X	

*Drawn up on the basis of scattered evidence and testimony. The disease probably occurred in many other small towns not listed here, and might well have prevailed to some degree in the listed points during years not checked.

CHAPTER IV

AN INTERREGNUM, 1859-1866

After the succession of epidemics in the fifties, unparalleled both in frequency and malignancy, New Orleans enjoyed a respite from epidemic yellow fever, the like of which had not been experienced since the initial visitation of 1796. In eight years, between the outbreaks of 1858 and 1867, Yellow Jack claimed a total of only about 300 victims, and in 1861, for the first time in over a half-century, not a single death from the yellow pestilence was reported in the Crescent City. For the better portion of that period in which yellow fever seemed to have abdicated its throne in New Orleans, the American nation suffered the agonies of its great Civil War, and New Orleans itself underwent the experience of military occupation by the forces of the Northern enemy.

The relationship between the Civil War and the health of New Orleans attracted the attention of the Louisiana State Board of Health even before the capture of the Crescent City by the Yankees. Late in 1861 the Board reported

a total mortality of only about 5,500 for the entire year, without a single death from yellow fever. They attributed this incredible phenomenon to the indirect benefits of the Federal blockade, "partial though it may have been," which, together with Louisiana's quarantine restrictions, had cut down the possibilities of introducing disease from a foreign port. It had been suggested, the Board stated, that the diminution of the usual summer population by the numbers then in military service would account for the decrease in mortality. However, the Board of Health considered this theory fallacious. They pointed out that the very conditions which had led away many to the army had resulted in the continued presence in New Orleans of those who ordinarily spent the summer in the North or in Europe.¹ At least one resident of the Crescent City agreed with the Board's position on the indirect advantages resulting from the Yankee blockade, for he wrote in his diary in July of 1861: ". . . the impudent 'Lincoln blockade' is acting in our favor by keeping out the yellow fever, and stimulating our heretofore dormant industry and self-reliance."²

¹Report of the Louisiana State Board of Health for 1861, 4.

²Wharton Diary, July 28, 1861.

The city of New Orleans fell to the Union forces in late April of 1862 and remained under military occupation for the duration of the war. Yellow fever, a subject much in the minds of both the conquerors and the conquered, was a source of great fear and dread to the one, of hope and encouragement to the other. General Benjamin F. Butler, in command of the Federal occupation forces during the first year, later wrote: "I learned that the rebels were actually relying largely upon the yellow fever to clear out the Northern troops, the men of New England and the Northwest . . . whom they had learned from experience were usually the first victims of the scourge." Furthermore, he had also heard "that in the churches [of New Orleans] prayers were put up that the pestilence might come as a divine interposition on behalf of the brethren."³ Although he found this difficult to believe, Butler noticed "many things that render[ed] it almost probable." It seemed to him that New Orleanians deliberately cultivated a "condition of perfect nastiness" as if in the hope of generating the fever. But if they did offer up prayers, he said, they

³Benjamin F. Butler, Butler's Book (Boston, 1892), 396.

did not do so aloud in the churches because Federal soldiers attended their services. However, "in the course of the liturgy the clergyman always gave out at a certain point . . . an opportunity for silent prayer," the General noted, "and then the people either prayed for the yellow fever, or Jefferson Davis to come there victorious; neither of which was comforting to the Yankee worshiper. . . ."4

The hopeful expectation of an epidemic which would wipe out the Yankees in the Crescent City was apparently not confined solely to New Orleanians. One newspaper in Virginia consoled the people of the Confederacy over the Union capture of New Orleans with this thought: "They have got the elephant, it is true, but it is a prize which will cost them vastly more to keep than the animal is worth, if his Saffron Majesty shall make his usual annual visit to the city and wave his sceptre in the hospitals there."5

⁴Benjamin F. Butler, "Some Experiences with Yellow Fever and its Prevention," North American Review, CXLVII (November, 1888), 530.

⁵Howard Palmer Johnson, "New Orleans under General Butler," Louisiana Historical Quarterly, XXIV (April, 1941), 478.

Northern soldiers, aware of the terrors of the fatal pestilence for which New Orleans was infamous, also knew about its obvious preference for the unacclimated stranger. And not for one moment were the forces of occupation allowed by the acclimated residents of New Orleans to forget this terrifying fact. Wishing to intensify this fear among the troops, one citizen took a measuring tape, a notebook, and a compatriot along on a sardonic mission. Approaching a group of Federal soldiers, he began to measure their height with the tape and jot down notations of the same. When asked the meaning of this action, he replied that a contract had been obtained for making 10,000 coffins, which would be needed ultimately for the steady stream of Yankee replacements sent in as yellow fever carried them off, one by one. Even the children of the Crescent City participated in the harassment of the United States troops. In late May and early June of 1862 they jeered at the soldiers in the streets:

Yellow Jack will grab them up
And take them all away.⁶

⁶Elisabeth Joan Doyle, "Civilian Life in Occupied New Orleans, 1862-65" (Ph.D. Dissertation, Louisiana State University, Baton Rouge, 1955), 56-57.

The citizens of New Orleans would have welcomed the arrival of the Saffron Scourge in the summer of 1862. They would have accepted gladly the aid of their old enemy against the new adversary from the North. According to General Butler, all their conversations in the presence of his officers included descriptions of past epidemic horrors, especially the disaster of 1853. Under a constant barrage of this demoralizing propaganda, Butler's men soon began to evidence its effects. Many of the officers were panic-stricken and depressed; some requested a transfer to a different area; others offered every conceivable excuse for a leave. But the General held firm and proceeded to study the problem of yellow fever in order to circumvent the coming of an epidemic. First of all, he asked an old New Orleans physician about ways and means to keep out the fever. No means existed, he was told, and no way to prevent its spread once under way. The physician admitted that quarantine of incoming vessels might be useful, but the presence of unacclimated troops together with the unsanitary condition of the city made it likely that the disease, if it broke out at all, would rage with great fury. Butler then obtained some books on the subject and a map of New Orleans indicating the localities where yellow fever

usually prevailed. Upon investigation of those places, he found them uniformly "filthy with rotting matter."⁷

After much reading, investigating, and thinking on the subject of the yellow pestilence, General Butler developed his own theory of the fever. He concluded that exhalations from putrid animal matter produced typhus fever and that exhalations from rotting vegetable matter produced congestive fevers. But with morbid matter from both animal and vegetable sources present in an atmosphere and the seeds or germs of yellow fever added to it, the Saffron Scourge would be propagated in epidemic form and would spread through that portion of the atmosphere contaminated by both animal and vegetable effluvia. In Butler's considered opinion, yellow fever was not indigenous to New Orleans; its "seeds" had to be imported. It was possible, he thought, for the seeds to last through the winter hidden away in woolen clothing and protected from the frost. Without the dual contamination of the atmosphere, however, he believed the seeds, whether imported fresh or preserved through the winter, would be unable to propagate. Having settled upon three indispensable factors involved in the

⁷Butler's Book, 398-400.

production of an epidemic, Butler set out to deal with them. First of all, since he believed yellow fever seeds to be imported, he instituted a strict quarantine on the Mississippi River below New Orleans. Secondly, he realized it would be impossible to dispose of all decaying vegetable matter because of the dense growth around the city. But if a combination of animal and vegetable elements was required to produce an epidemic atmosphere, the disposal of either one of the two would suffice. He was convinced that putrid animal matter and filth could be cleared away. Having clearly outlined the problem in his mind, General Butler set to work to accomplish the two indicated objectives: instituting an effective quarantine system and cleaning up the city of New Orleans.⁸ Interestingly enough, his theory represented a composite of practically all the epidemiological concepts which had been floating around for centuries, and his program of prevention combined the two suggestions so long debated by yellow fever philosophers: quarantine and sanitation.

Although previous attempts had been made to institute such measures, never before had sanitation and quarantine

⁸Ibid., 400-401, 407-408.

been so rigorously enforced in New Orleans as they were under Butler. He established a very strict quarantine system at the regular station seventy miles below New Orleans where, in his words, "thirty-two and sixty-eight pound shots should be the messengers to execute the health orders." All vessels coming up river were required to stop below Fort St. Philip, about five miles down river from the quarantine station, for inspection by the health officer, who then reported to the General the condition of the vessel, its passengers, crew, and cargo. If the quarantine physician reported a clean bill of health and Butler in turn telegraphed his consent, then and only then could the vessel proceed up river to the Crescent City. "If any vessel attempted to evade quarantine regulations and pass up without being examined," said General Butler, "the vessel was to be stopped if there was power enough in the fort to do it." Unlike Louisiana's lawmakers who had drafted the state's quarantine legislation, Butler accepted the literal meaning of the term quarantine and required any ship with any infectious sickness on board to remain at the station for forty days, after which another thorough inspection was necessary. Furthermore, all vessels from ports where yellow fever was prevailing had to spend forty days in

quarantine, whether they arrived with a clean bill of health or not.⁹

General Butler obtained the services of a competent physician to administer the inspection and report on the condition of incoming vessels and paid him well for performing these duties. The General threatened to invoke the death penalty, however, should this physician make false reports and allow an infected ship to come up to New Orleans. According to Butler's account, only on one occasion during his command in 1862 did yellow fever slip through the stringent quarantine, and this was not because of negligence on the part of the quarantine physician. Butler himself had allowed a tug carrying much-needed provisions from New York to come up river without undergoing the forty-day detention, accepting the captain's oath that coal, and only coal, had been taken on at the Nassau stop where yellow fever prevailed. Several days later two cases of fever appeared in the French quarter in the persons of two passengers from Nassau who had come in on the tug. The military took over immediately and surrounded the square where the cases were located. Under Butler's order

⁹Ibid., 401.

certain acclimated persons went in to attend the patients and came out only after being thoroughly cleansed. Fires fed with tar and pitch burned day and night at the four corners of the square. When the two patients died, everything in and around the building which Butler thought might harbor yellow fever seeds were burned; even the bodies were cremated. No other cases developed, but the deceitful captain of the tug spent three months in jail and paid a fine of \$500.¹⁰

On first assuming control of New Orleans, General Butler had not intended to undertake the problem of sanitary reform, but rather expected to leave the administration of sanitary laws, together with other ordinary civic functions, in the hands of the duly constituted municipal government. He soon realized, however, the necessity of positive action on his part against what he considered the causative forces of yellow fever.¹¹ After having established quarantine

¹⁰Ibid., 403; 408-10. Writing on another occasion, Butler mentioned only one case of yellow fever imported from Nassau. See Butler, "Some Experiences with Yellow Fever and its Prevention," loc. cit., 531, 536-37; and The Medical and Surgical History of the War of the Rebellion, Part III, Vol. I (Washington, 1888), 675-76.

¹¹James Parton, General Butler in New Orleans (New York, 1864), 295.

regulations, Butler proceeded to the "Herculean task" of cleaning up the city of New Orleans, early in June of 1862. In a message to the Military Governor and the New Orleans City Council, General Butler directed that the city employ a force of two thousand men, fully equipped with the necessary tools and under adequate supervision, for a period of at least thirty working days, to clean the streets, squares, and unoccupied lands of the city. Seeking the full cooperation of the council, Butler played upon their sentiment in this manner: "The epidemic so earnestly prayed for by the wicked will hardly sweep away the strong man, although he may be armed, and leave the weaker woman and child untouched." Reminding them of the presence of many women and children who ordinarily left New Orleans during the summer months, he said, "The miasma which sickens the one [the troops] will harm the other."¹²

One squad from the cleansing force was sent to the French Market with an order "accompanied by a few bayonets" that the area be cleaned. The superintendent in charge of the market said he could not have it done; nevertheless, the clean-up crew went ahead with the task, scraped up the

¹²Butler's Book, 403-404.

filth, sent it down the river, and charged him with the expense. It is not surprising that General Butler gave top priority to the cleansing of this particular area. On first inspecting the place, he had been shocked by its filthy state. "In the French market," he wrote, "the stall women were accustomed to drop on the floor around their stalls all the refuse made in cleaning their birds, meat, and fish." Furthermore, he added, "Here it was trodden in and in. This had been going on for a century more or less."¹³

The sanitary forces then went through the streets, clearing away all putrefying animal matter, scraping and sweeping out every drain and ditch in the city. The city water-works was ordered to flush the streets with all its pumps, and as the water flowed through the freshly cleaned drains and ditches into the canals leading to Lake Pontchartrain, the accumulated filth was forced out into the Lake and eventually into the Gulf.¹⁴

Strict orders were issued to the people of New Orleans on the subject of cleanliness. The head of every

¹³Ibid., 400, 406; Butler, "Some Experiences with Yellow Fever and its Prevention," loc. cit., 536.

¹⁴Butler's Book, 406-407; Butler, "Some Experiences with Yellow Fever and its Prevention," loc. cit., 536.

household was forced to have his premises cleaned inside and out to meet the approval of military inspectors. It was directed that all refuse from each household be deposited in a box or barrel acceptable to the inspector, and on two or three specified days a week that the receptacle be placed at the end of the street. From that point the receptacle's contents would be picked up and hauled off by mule teams. Those in charge of the wagons would disinfect the containers with chloride of lime if necessary. Furthermore, all persons were expressly forbidden to throw anything of any kind into the streets, alleys, or any open spaces, including their own back yards.¹⁵

One might expect that such strict regulations would be most difficult to enforce. Not at all, declared Butler, and he provided several examples to illustrate his point. One citizen, deliberately testing the order, walked along the street and called a policeman to watch him throw down a small piece of white paper. Informed of this willful disobedience, Butler sent for the man, who admitted the act and insisted it was his privilege to toss paper. The General replied that "the streets were made to pass

¹⁵Butler's Book, 404.

through, and when he took his privilege I would take mine and pass him through the streets into the parish prison to stay three months." Another case involved a "high-toned woman" who tried to ignore the sanitary regulations. A "fashionable lady" of New Orleans adamantly refused to clean her back yard, which contained a box of excrement not yet hauled off from the privy. She informed the military inspector that her back yard was "as I choose to have it, and it won't be altered at the order of any Yankee." When the officer told her to gather up whatever clothes she wanted to take along to jail, she burst into tears and agreed to accept another opportunity to comply with the regulations. By the next afternoon, "the yard was in apple-pie order."¹⁶

Even Butler with all his efforts apparently was unable to attain a perfect state of purity in New Orleans. In August of 1862 the editor of the Daily True Delta complained of the filthy gutters. Having observed several with green scum on the water "thick enough to bear the weight of a small-sized bird," he recommended that the authorities attend to the removal of all such pestilential

¹⁶Ibid., 405-406.

influences.¹⁷ Nevertheless, General Butler must be given credit for whipping New Orleans into what was perhaps a better sanitary condition than it had ever enjoyed before. In November of 1862 the Picayune stated that only once before had the Crescent City been so clean; a relatively pristine condition had prevailed immediately after the disaster of 1853 when the city government had been aroused temporarily to action. After the Civil War, even the most acrimonious rebel was willing to admit that General Benjamin F. Butler had been "the best scavenger we ever had among us."¹⁸

When the Union forces assumed control of New Orleans in the spring of 1862, none of Butler's surgeons had ever seen a case of yellow fever or possessed any knowledge about combatting the "hideous foe." In July, after the inauguration of sanitation and quarantine measures, a pamphlet was prepared, with the assistance of several New Orleans physicians, for the instruction of the Union surgeons in the Department of the Gulf. It outlined in detail the symptoms for diagnosis and prognosis, in addition to a course of

¹⁷New Orleans Daily True Delta, August 20, 1862.

¹⁸Johnson, "New Orleans under General Butler," loc. cit., 478.

treatment for yellow fever. The pamphlet stated that every precaution had been taken to prevent the fever's occurrence, but emphasized the ever-present possibility of an outbreak, as well as the duty of an army surgeon to be prepared for all emergencies.¹⁹ Fortunately for the Yankees, the first year of the Federal occupation of New Orleans passed with only two known deaths from yellow fever. Since the records are imperfect, it is possible that several other deaths occurred. The significant fact is, however, that in spite of the appearance of a few cases, the pestilence did not spread to any noticeable extent.²⁰

In November of 1862 General Nathaniel P. Banks was appointed to replace "Beast" Butler as Major-General Commanding the Department of the Gulf. When Butler left New Orleans in December, he stated in his Farewell Address to the citizens of the Crescent City: "I have demonstrated that the pestilence can be kept from your borders. . . . I have cleansed and improved your streets, canals, and public

¹⁹Butler's Book, 398; Some Practical Observations on Yellow Fever, Published for the Use of Surgeons of the Volunteer Forces in The Department of the Gulf (New Orleans, 1862).

²⁰N. O. Med. & Surg. Jour., XXIII (July, 1870), 569.

squares. . . ."21 One Creole of New Orleans took a slightly different view of the subject, according to a story printed in the Picayune several years later. When asked to admit that Butler had demonstrated great ability in preserving the Crescent City from pestilence while in command there, the New Orleanian supposedly said: "By gar, vat you take me vor? You no believe in a God? You no believe zere is mercie? Yellow fever and G-e-n-e-r-e-l Butler at the same time!!!"22

During the remainder of the war period, sanitary regulations were administered and enforced through the cooperative efforts of General Banks (in command of the Department), the Military Governor, the Mayor of the city, the Provost-Marshal, the Medical Director of the Department, and specially appointed Sanitary Inspectors. Quarantine regulations continued in force, although never quite as strictly administered as under General Butler.²³ Among the

²¹Parton, General Butler in New Orleans, 605.

²²Picayune, November 14, 1867.

²³Elisha Harris, "Hygienic Experience in New Orleans during the War: Illustrating the Importance of Efficient Sanitary Regulations," Southern Journal of the Medical Sciences, I (May, 1866), 25-30; Doyle, "Civilian Life in Occupied New Orleans, 1862-65," 66-67.

civilian population of New Orleans, only two yellow fever deaths were reported in 1863, six in 1864, and one in 1865. In 1863 and 1864 yellow fever cases appeared on several vessels of the river fleet, spreading from there to the Naval Hospital. But even there the spread was not extensive: about 100 cases in 1863 and 200 in 1864.²⁴

Under war-time occupation, the Board of Health had been converted into a military bureau with the Medical Director of the Department of the Gulf serving as president. Not until April of 1866 was the Louisiana State Board of Health reorganized on its pre-war basis, with six members appointed by the Governor and three by the New Orleans City Council. Almost immediately the Board encountered its traditional problems: no power, no funds, no cooperation from the municipal authorities.²⁵ In July of 1866 the Picayune editor commented on the need for more energetic enforcement of sanitary measures to remove the potential sources of pestilence. The editor felt that the city authorities should pay more attention to "this cause

²⁴N. O. Med. & Surg. Jour., XXIII (July, 1870), 569-74.

²⁵Report of the Louisiana State Board of Health for 1866-67, 3-4.

of complaint and of danger."²⁶

Provost-Marshal James Bowen, who served in New Orleans for two years during the war, had predicted that with the return of the "usual lax administration" of sanitary regulations by the civil authorities New Orleans would again be visited by the yellow pestilence.²⁷ As if to fulfill his prophecy, both yellow fever and Asiatic cholera appeared in New Orleans in 1866. While cholera claimed more than 1,200 victims, the Saffron Scourge struck lightly that year, causing only 185 fatalities. But the following year, 1867, witnessed a two-fold increase in the city's total mortality over that of 1866 and a yellow fever epidemic which caused more than 3,000 deaths.²⁸

In the spring of 1866 Dr. Erasmus Darwin Fenner reviewed the subject of health in New Orleans under military rule to determine what lessons might be learned for future application. He praised the tremendous efforts exerted by

²⁶Picayune, July 24, 1866.

²⁷Harris, "Hygienic Experience in New Orleans during the War," loc. cit., 30.

²⁸Report of the Louisiana State Board of Health for June 1866-January 1867, 6, 12-13; Report of the Louisiana State Board of Health for 1867, 18, 20.

the authorities throughout that period toward the problem of sanitary reform. "Such efforts were never made here before," he stated, "although so often urged by the medical profession in previous years." But, Dr. Fenner added, "perhaps, it may be said such motives were never presented before." In spite of the war and the dark side of its balance sheet, he felt that New Orleans should be grateful for "this great sanitary experiment." Compared to its previous condition, the city had been kept unbelievably clean throughout the period. "It was a Herculean task," Fenner declared, "and, in our humble opinion, nothing short of military despotism would have accomplished it."²⁹

To Dr. Fenner the great lesson of the episode consisted in the validation of his theory of fever causation. He had long held the opinion that filth and atmospheric contamination produced diseases of all sorts, including yellow fever. Following the premise of local causation, he had always reasoned that sanitary measures would prove the best means for preventing disease. In contrast to this, many

²⁹E. D. Fenner, "Remarks on the Sanitary Condition of the City of New Orleans, during the period of Federal Military Occupation, from May 1862 to March 1866," Southern Journal of the Medical Sciences, I (May, 1866), 22-23.

persons attributed the freedom of New Orleans from epidemic pestilences during war-time occupation to the stringent quarantine measures. But Fenner disagreed. Although quarantine had been enforced rather strictly through much of the period, he knew definitely about one case imported from Key West; there were probably others. Admitting the likelihood of several imported cases of yellow fever each year during the period, he thought it extraordinary that the disease had not become epidemic in the city. It could only be explained, of course, by the strict enforcement of sanitary regulations. And, as he reasoned further, how could quarantine be expected to afford complete protection against a disease which was indigenous to New Orleans?³⁰

The "sanitary experience" of the period between 1862 and 1866 had provided "useful instruction," and Dr. Fenner felt it should not be overlooked by the citizens of New Orleans. Suggesting that Generals Butler and Banks deserved much credit for their achievements in the Crescent City, he remarked: "We may yet have occasion to mingle some thanks among the many curses that have been heaped

³⁰Ibid., 23-24.

upon their heads for their unnecessary severity upon the citizens of New Orleans." For twenty years or more, some physicians of the Crescent City had preached the gospel of cleanliness without appreciable effect. But, said Fenner, "In the mysterious course of events the hand of the tyrant has been brought to our aid, and the results are marvelous." Now that the true path had been clearly demonstrated, not only by logic but also by the Yankee experiment in not-so-gentle persuasion, Dr. Fenner hoped that New Orleanians would not fall by the wayside.³¹

Dr. Stanford E. Chaillé, eminent New Orleans physician, editor, and medical educator, studied the facts relating to yellow fever, and sanitation during the military occupation of New Orleans and arrived at conclusions somewhat different from Dr. Fenner's. Writing in 1870, Chaillé noted that many persons attributed the relative freedom from yellow fever during the war to effective sanitation measures. He felt that the conclusion was "not logically deducible from the true premises." The faulty syllogism went something like this: For years New Orleans had been visited by yellow fever epidemics which carried

³¹Ibid., 24-25.

off thousands of victims, and during those years the city was incredibly filthy. During the four-year period from 1862 through 1865 no epidemic occurred, and New Orleans was one of the cleanest cities in the country. Therefore, the exemption from epidemics was due to the unusually clean condition of the city. Chaillé then proposed to state the "correct syllogism with the true premise" in this manner:

New Orleans enjoyed during eight years, 1859-66, an exemption, unexampled in her history, from yellow fever epidemics. During four of these eight years, viz., 1859-60-61-66, the city suffered notoriously with its habitual filth, and during the four remaining years, viz., 1862-65, it enjoyed an unusual degree of cleanliness. Therefore, ---- ---- ---- what?

If sanitary measures protected the city during the war years, what factor operated in the other non-epidemic years before and after the war, when New Orleans was as filthy as ever?³² Chaillé's question is a significant one, and not entirely answerable even in the light of modern medical knowledge.

The mortality from various diseases among the occupation forces in the Crescent City was great enough as it was; had the Saffron Scourge raged, as New Orleanians for

³²N. O. Med. & Surg. Jour., XXIII (July, 1870), 589-92.

once hoped it might, the death toll would have been exceedingly great. One can safely say that luck was with the Yankees! It is impossible to determine just how much the rigid enforcement of quarantine and sanitary measures had to do with the city's exemption from a yellow fever epidemic during war-time occupation. Quarantine, when literally enforced, would have held out the disease, but after Butler, the detention period was generally reduced from forty days to ten. Moreover, yellow fever was definitely imported on several occasions, but failed to spread extensively. Sanitary regulations might have reduced the incidence of certain endemic diseases and certainly eliminated some of the offensive, if not pestilential, odors of the city. Such measures would hardly have affected the yellow fever mosquito, however, which chose cisterns and indoor water receptacles as breeding places in preference to gutters, stagnant pools, and swamps. Many factors, some affected by chance, are necessary for the production of a full-scale yellow fever epidemic. In addition, there is the problem of the not-yet-fully understood virus itself, known only by its activities, and evidencing a considerable amount of variability in those activities over a long period of time. For whatever reason, yellow fever had

already begun its gradual retreat from the New Orleans sector after reaching the height of its activity in the 1850's. Although the disease continued to excite much interest in the second half of the century, except for two or three major outbreaks its appearances were mild in nature.

Unlike Dr. Chaillé, many people tended to overlook the years immediately before and after the war when no epidemic had occurred. A tremendous impression had been created by the ~~simultaneity~~ simultaneity of three factors during the war years: strictly enforced sanitary measures, rigid quarantine, and the absence of a yellow fever epidemic. As a result, many were thoroughly convinced that either quarantine or sanitation or both had prevented the occurrence of an epidemic. Medical opinion, although still divided, began to incline toward the support of quarantine, as well as sanitation.³³ Public opinion moved one small step closer toward recognizing the validity of regulatory measures to preserve the health of the city. In spite of the faulty logic involved, an attitude slightly more favorable to the idea of public health had undoubtedly developed out of the events of the Civil War period.

³³Ibid., 563-64.

YELLOW FEVER MORTALITY IN NEW ORLEANS,
1859-1866

<u>Year</u>	<u>Estimated Deaths</u>	<u>Population (Approx.)</u>
1859	92	167,000
1860	15	
1861	0	
1862	2	
*1863	2	
*1864	6	
1865	1	
1866	185 to 192	178,000

*During 1863 and 1864, some 100 and 200 cases, respectively, occurred in the United States river fleet, resulting in a number of deaths, but the disease failed to spread to the city.

CHAPTER V

INTERMITTENT VISITATIONS, 1867-1899

Yellow fever's activity in Louisiana in the last third of the nineteenth century presented a picture remarkably different from its earlier pattern. Prevailing ideas, attitudes, and reactions toward the fever also underwent some rather striking changes. On the other hand many characteristics of its earlier history, remained the same. Problems and controversies involving quarantine, sanitation, the Board of Health, commercial interests, and the New Orleans City Council continued throughout, with variations on old themes and the introduction of several new ones. The mystery of yellow fever causation and transmission persisted to the end of the century. Although in the early 1880's Carlos Finlay of Cuba advanced the idea of yellow fever's transmission by the mosquito, that hypothesis attracted little attention at the time. The germ theory, however, gained widespread acceptance in the 1870's and 1880's and led to an intensive but fruitless search for the yellow fever germ in the blood and excretions of

patients.

In the thirty-three years from 1867 through 1899, New Orleans and Louisiana experienced five epidemics: only two, in 1867 and 1878, which could compare with earlier visitations in terms of mortality, and three relatively mild outbreaks, in 1870, 1873, and 1897. During seventeen of the thirty-three years, the annual yellow fever mortality in New Orleans ranged from one to sixty, and eleven years passed without a single yellow fever death.¹ On a number of occasions the Saffron Scourge spread from the Crescent City to other points around the state. Except in 1867, 1873, and 1878, however, the disease exhibited a less virulent character than it had in an earlier period.

One of the two most serious yellow fever epidemics in the post Civil War period occurred in 1867, during Reconstruction. The bitter conflict of the American Civil War, terminated in the spring of 1865, was followed by a long and turbulent period during which Union troops remained in the South to oversee the work of Reconstruction. Although the last of the troops were not removed from

¹See Chart, "Yellow Fever Mortality in New Orleans, 1867-1899," at the end of this chapter.

Louisiana until the spring of 1877, the Board of Health had been returned to civilian control in the spring of 1866, and the execution of sanitary regulations again became the responsibility of local authorities. Without the incentive provided by bayonet and military arrest, New Orleans again succumbed to the elements of filth. In May of 1867 the editor of the New Orleans Picayune called attention to the crowded and unsanitary tenement houses and the drainage canals and gutters filled with garbage, giving off "a stench so rank it smells to heaven." Furthermore, he recommended that the Board of Health and the municipal authorities take action before an epidemic occurred, pointing out that after one started, there was little anyone could do.²

After yellow fever appeared in the Crescent City in July of 1867 and carried off a few victims, the Board of Health then provided for the cleansing and disinfecting of the fever localities. Temporarily it seemed that the disease had been halted, but early in August a malady strongly resembling yellow fever erupted "with great violence" at military headquarters. Even then the

²Picayune, May 26, 1867.

pestilence made slow progress for on August 14 the Board of Health reported only a slight increase in fever cases and declared New Orleans relatively healthy. Nevertheless, the Board strongly recommended the use of carbolic acid and sulphur as disinfectants.³

On August 22 General Philip S. Sheridan, United States army commander in Louisiana, telegraphed to headquarters in Washington that yellow fever had assumed an epidemic character in New Orleans. He requested that the Chief Surgeon at New Orleans be authorized to employ nurses to attend the stricken troops; his request was granted immediately. In spite of Sheridan's concern, neither the Board of Health nor New Orleanians in general yet considered the disease epidemic. According to the Crescent City's accepted usage of the term, a disease became epidemic only when its victims exceeded the total number of fatalities from all other causes in a given period. On August 27 the Picayune editor observed that most fever cases had occurred among the unacclimated Europeans and Northerners, and he noted calmly: "Seventy-seven deaths in a week does not create much alarm in a

³Ibid., July 30, 31, August 3, 7, 14, 1867.

community that has suffered in the same space of time to the number of nearly twelve hundred."⁴

In the September issue of the New Orleans Medical and Surgical Journal the editor commented on yellow fever's steady increase during August. He admitted that an epidemic might yet develop because of the high percentage of unacclimated persons in the population, but insisted that the malady thus far had been an unusually mild form of fever. At any rate, the editor remarked: "New Orleans has long enjoyed the distinction of preeminence in sickness, as well as wickedness, among the cities of this happy country, and we are not disposed now to take these points up for controversy." Furthermore, he added sarcastically, "As we are a people governed by majorities, it is probably becoming to admit the logic and 'accept the situation.'"⁵

In spite of all hopes to the contrary, "Bronze John on his Saffron Steed" continued to increase his ravages, visiting virtually every street, and leaving "the evidence

⁴Ibid., August 23, 27, 1867.

⁵N. O. Med. & Surg. Jour., XX (September, 1867), 284-86.

of his malevolence" strewn about the city in September and October--200, 300, 400 fatalities per week. On September 22 one New Orleans newspaper commented on the city's unhappy lot: "How sad to think, laboring for months as we have pertinaciously to recover from our political adversities, that the trying ordeal of a terrible plague as we are now suffering from should be inflicted upon us." Military occupation, Reconstruction, and Yellow Jack seemed a bitter potion to swallow simultaneously. But, the editor reasoned, the dispensations of the omniscient Almighty are undoubtedly all for the best, whatever they may be. By late October the fever mortality had declined considerably. On November 1 a light frost occurred, resulting in a prediction that the "Bronze Warrior" on his "saffron steed" soon would be charging away. The Board of Health declared the epidemic over on November 5.⁶

In the epidemic of 1867 the Saffron Scourge claimed 3,107 victims in New Orleans, not including the fatalities among the United States forces stationed there. The Medical Director reported 213 yellow fever deaths among the

⁶Picayune, September 16, 21, 22, 24, October 8, 21, 28, November 1, 3, 6, 1867.

1,000 to 1,100 troops, making a total fever mortality of 3,320 in the Crescent City. With an estimated case fatality rate of eight per cent, the disease had attacked about 41,500 persons, or about one-fourth of the population in the city during the outbreak.⁷

Once again the scourge of New Orleans had broken through the barriers erected by Louisiana's quarantine regulations. Although they failed to prevent the fever's entry, the Board of Health undertook an active campaign to limit its spread through the city. At the very onset of the pestilence, the Board placed every house where a fever case was reported under the direction of specially appointed health officers to attend to the cleansing of the premises and to fumigate the place with sulphurous acid gas and carbolic acid.⁸ Significantly, these measures represent the first systematic official action to combat the disease in a house-to-house campaign of disinfection. A more positive approach to the yellow fever problem was in the making, faulty as the procedure might have been.

⁷Report of the Louisiana State Board of Health for 1867, 18; N. O. Med. & Surg. Jour., XXI (April, 1868), 413-14.

⁸Report of the Louisiana State Board of Health for 1867, 4-5.

In the attempt to disinfect houses, the Board accidentally chose a weapon also destructive to mosquitoes, sulphurous acid gas. Unfortunately, by the time the health officers arrived on the scene, undoubtedly countless mosquitoes had already been infected from the patient. Nor is it likely that the Board was able to attend to every single house during an epidemic involving over 40,000 cases. Nevertheless, the efforts of the Louisiana State Board of Health represented a praiseworthy attempt to fight the pestilential foe.

But disinfection failed to arrest the progress of the epidemic in 1867, which was said to have been the most widespread epidemic ever in the history of the Crescent City. No class was exempt from its ravages; even a few Negroes and native New Orleanians, ordinarily less likely victims, were listed among the fatalities. The Board of Health tried to account for the tremendous number of cases in proportion to the number of deaths. Observing that the absence of epidemic yellow fever since 1858 had rendered all children under eight years of age susceptible to the disease, the Board also noted the influx of many emancipated Negroes to New Orleans after the Civil War. Since both Negroes and children exhibited a strong tendency

toward recovery from yellow fever attacks, the Board considered these factors partially responsible for the large number of cases and the low case fatality rate.⁹

Suffering among the poor during the summer and autumn of 1867 was terribly acute. One observer called that period "one of the most distressing to those of limited means ever experienced in New Orleans." The pestilence disrupted summer business and delayed the fall business season about two months. In the midst of the crisis, high rents and high prices for the basic necessities of life intensified the distress of the indigent. When one of the New Orleans banks failed during the epidemic, many persons among the laboring classes lost whatever savings they might have had at the time of greatest need.¹⁰ As in previous epidemic disasters, the Howard Association came to the aid of the destitute fever victims and their families, and numerous physicians freely offered their services to those who could not pay. Even the recent

⁹N. O. Med. & Surg. Jour., XX (November, 1867), 419; Report of the Louisiana State Board of Health for 1867, 6.

¹⁰Gardner's New Orleans Directory for 1868 (New Orleans, 1868), 9, 11.

enemy of the North supplied some assistance to the unfortunate city. In November of 1867 the editor of the New Orleans Medical and Surgical Journal expressed "the gratitude of this impoverished community" to all those Northern friends who had "with free hand and open purse, promoted the efforts of our self-sacrificing citizens."¹¹

Other communities in Louisiana also suffered the affliction of the yellow pestilence in 1867. The disease appeared in Plaquemine, Alexandria, Shreveport, Clarenton, Jeanerette, New Iberia, St. Martinville, Opelousas, Washington, Lafayette, Vermillionville, and Lake Charles, as well as other hitherto unvisited towns in the southwestern portion of the state.¹² The fever did not prevail with equal severity in all places where it appeared; some towns escaped with only a few cases, while others experienced serious epidemics. Two of the worst visitations in Louisiana outside of New Orleans occurred in New Iberia and Washington.

¹¹N. O. Med. & Surg. Jour., XX (November, 1867), 420.

¹²Toner, "Reports Upon Yellow Fever," loc. cit., 371-73; Augustin, History of Yellow Fever, 861, 893, 902; Picayune, September 15, 18, October 16, 31, 1867; Plaquemine Weekly Iberville South, October 19, 26, December 21, 1867; Report of the Louisiana State Board of Health for 1867, 7-8.

New Iberia, a small town in south Louisiana, about fifteen miles from the coast and over one hundred miles west of New Orleans, was in the throes of a serious outbreak long before the fever reached epidemic proportions in the Crescent City. Allegedly introduced from Galveston, the disease commenced its attacks in the latter part of July and raged violently in that small town for well over a month. In the second week of August the Mayor of New Iberia reported the illness of several of the town's physicians and requested that nurses and doctors be sent from New Orleans. Two faculty members of the New Orleans School of Medicine, a resident medical student from Charity Hospital, and several Sisters of Charity went to the aid of the desperate community, where they immediately established a temporary hospital. The New Orleans, Opelousas and Great Western Rail Road and the Attakapas Navigation Company both offered to transport nurses and supplies to New Iberia without charge. E. F. Schmidt, President of the New Orleans Howard Association, went in and helped organize a Howard Association of New Iberia, which immediately employed a number of nurses from the Crescent City. Business came to a standstill, about half of the townspeople were unemployed, and "the most complete destitution"

prevailed. In addition to their work with the sick, the newly formed Howard Association attended to the needs of the most unfortunate citizens with assistance provided by contributions from Franklin, Lafayette, Opelousas, and New Orleans. The Shakespeare Club of New Orleans gave a benefit performance for the relief of New Iberia; one New Orleanian shipped over two casks of ice weekly; even the New Orleans City Council appropriated a thousand dollars as a contribution to the afflicted community. By the end of August the fever began to subside, and the New Iberia epidemic was virtually over when the New Orleans visitation really got under way. In a population of 1,600 to 1,800, considerably reduced by the flight of many citizens, no less than 700 cases and seventy deaths had occurred by August 31. One observer on the scene wrote: "It is heart-rending . . . to see and realize the affliction and desolation of our community--scarce a family but is in mourning, and in many instances almost entire families have been swept to the grave by the 'fell destroyer.'"¹³ The devastation of a small community by the Saffron Scourge

¹³Picayune, August 6, 8, 10, 12, 13, September 3, 1867; Bee, August 28, 1867; Iberville South, September 7, 1867.

presented a tragedy perhaps even more intensely personal than the large-scale disaster produced within a metropolis.

Another Louisiana town even smaller than New Iberia experienced a particularly severe yellow fever epidemic in 1867. During September and October Yellow Jack attacked over 500 persons and claimed at least seventy-three victims in the small community of Washington, Louisiana, about forty miles north of New Iberia. In late October a letter from Washington stated: "All business is suspended. . . . Our town has a deserted appearance. Provisions are getting scarce, and sometimes are not to be had." Among the citizens taking flight when the disease appeared were three of the four town council members and two of the town's three physicians. The one doctor remaining in Washington truly had more than he could handle, but it was said that he carried the burden well. Obviously, New Orleans, by this time fighting its own battle, was unable to send as much assistance to Washington as it had sent to New Iberia. Nevertheless, the New Orleans Howard Association contributed one thousand dollars of its funds to aid the small community.¹⁴

¹⁴Picayune, October 28, 1867.

Following the epidemic of 1867, Louisiana enjoyed two summers almost completely free of the yellow pestilence. In the Crescent City only three yellow fever deaths were reported in 1868 and three in 1869.¹⁵ With few exceptions, when New Orleans escaped an epidemic, so did the rest of the state. In the late summer and autumn of 1870, New Orleans suffered a mild outbreak, causing only 587 deaths in a population of more than 190,000.¹⁶ Since the quarantine had been applied to all vessels arriving from infected ports (counting days at sea as part of the detention period), the editor of the New Orleans Medical and Surgical Journal believed that yellow fever had originated in New Orleans in 1870. By this time many physicians and laymen had combined both of the old opposing views into a belief that the fever was imported in some years and indigenous in others. It seemed that the pestilence had originated and for a time remained in the area of the French Market among a class "whose hygienic condition in their domiciles is about the most unfavorable in the whole city." Although the epidemic

¹⁵N. O. Med. & Surg. Jour., XXIII (April, 1870), 398.

¹⁶Report of the Louisiana State Board of Health for 1870, 74, 80.

of 1870 had not been nearly as severe as he had feared it might be, the medical journal editor remarked: ". . . this hostile incursion has brought dismay upon our unacclimated population, has revived the evil reputation of our city, and has done incalculable damage to its commercial interests."¹⁷ The two preceding epidemic-free summers made the outbreak of 1870, although a mild one, seem rather unfortunate. The fever did not spread to any considerable extent in Louisiana that year. Apparently, New Iberia, Ville Platte, and Port Barre were the only points outside the Crescent City which experienced noteworthy visitations.¹⁸

In 1871 New Orleans reported only fifty-four yellow fever fatalities; in 1872, only thirty-nine.¹⁹ Then came the unique occurrence in 1873 when Shreveport suffered a more serious epidemic than the Crescent City, the only time that a sizeable interior community of Louisiana

¹⁷N. O. Med. & Surg. Jour., XXIII (October, 1870), 874-76.

¹⁸Toner, "Reports Upon Yellow Fever," loc. cit., 369-73; Augustin, History of Yellow Fever, 844-902.

¹⁹Report of the Louisiana State Board of Health for 1871, 98; Report of the Louisiana State Board of Health for 1872, 135.

outranked New Orleans in terms of yellow fever mortality. In New Orleans the disease claimed only 226 victims; in Shreveport, about 759. The State Board of Health attributed the difference in malignancy between the two outbreaks to the widespread use of disinfectants in New Orleans, a doubtful hypothesis at best. The Saffron Scourge probably caused more deaths in New Orleans than the reports indicate. According to the Board's report, about half the population suffered cases of "Dengue" during the epidemic season, some of which finally "assumed the appearance" of yellow fever and terminated in death.²⁰ Although seldom fatal, dengue fever is easily confused with the yellow pestilence in its early stages. Probably a number of cases, and especially the deaths, reported as dengue fever were actually caused by yellow fever. Nevertheless, the New Orleans disease was completely overshadowed by the devastating plague in Shreveport.

The numerous cases began to attract considerable attention in late August, and by the first of September the Shreveport epidemic was well under way. Of a population

²⁰N. O. Med. & Surg. Jour., L (May, 1898), 636; Report of the Louisiana State Board of Health for 1873, 9, 55.

numbering from 10,000 to 12,000, it was estimated that over half fled the city. By mid-September most business establishments had shut down and the streets were almost empty. The community had been completely quarantined by all neighboring towns, and the telegraph served as the only means of communication.²¹

A Howard Association of Shreveport was organized and in mid-September established an infirmary for the indigent sick. Contributions poured in from New Orleans, Philadelphia, Cincinnati, and all over the country. The Western Union Telegraph Company offered free use of its lines for the transfer of financial assistance to Shreveport. Since the town was isolated by the quarantine regulations of neighboring communities with the consequent tie-up of railway transportation, special arrangements had to be made for getting nurses, physicians, and supplies into the stricken center. The Southern Express Company contracted with the New Orleans Howard Association to ship without charge all supplies destined for Shreveport as far

²¹Report of the Committee appointed by the Shreveport Medical Society on the Yellow Fever Epidemic of 1873 at Shreveport, Louisiana (Shreveport, 1874), 12-13; Henry Smith, Report of the Yellow Fever Epidemic of 1873, Shreveport, Louisiana . . . (New Orleans, 1874), 3.

as their terminus at Monroe, Louisiana. The agent in Monroe promised that the goods would be "as promptly forwarded as practicable" and presumably by whatever means were possible. The Texas and Pacific Railroad provided relief trains twice a week throughout the epidemic to carry poultry, eggs, and other provisions to a point outside the city where they might be picked up and hauled into town by persons from within the contaminated area. Money, supplies, and experienced nurses thus were channelled into Shreveport. New Orleans in particular empathized with the desperation of the victimized community. As its own small epidemic was almost eclipsed by the suffering of the town in northwest Louisiana, the Crescent City provided assistance freely and generously. In addition to the contributions of individuals, businesses, and the Howard Association, the Shakespeare Club and the Orleans Dramatic Association, as they had done on previous occasions, again provided a "dramatic entertainment," this time to raise funds for the Shreveport sufferers.²²

In late September as the fever continued to rage in

²²Smith, Report of the Yellow Fever Epidemic of 1873, 3; Picayune, September 16, 17, 18, 19, 20, 1873.

Shreveport, the editor of the New Orleans Picayune remarked that the same mortality rate in New Orleans would amount to about a thousand deaths per day. In addition to the fierce mortality rate, the destitute circumstances of the citizenry were "as terrible as the disease." The Howard Association of Shreveport not only attended to yellow fever patients, but also fed the poor and opened an asylum for children made orphans by the epidemic. The expenses of that association totalled \$1,000 to \$2,000 per day.²³

Conditions grew worse in late September and early October of 1873. The New Orleans Picayune considered the "terrible fever in Shreveport" at least four times worse than the "fearful epidemic that scourged this city in 1853." On the last day of September the news telegraphed from Shreveport read: "We no longer have funerals. The hearses, followed by one or two carriages, dash through the streets like a section of artillery in a battle seeking a position. . . . the coffins [are] shoved in the hearses and driven rapidly to the cemetery. This is the case even with the most prominent citizens." By this time the

²³Picayune, September 23, 26, 27, 1873.

Howard Association was feeding about two-thirds of the resident population, including white and Negro alike. Hundreds of citizens were without money, without work, without prospects. Rapidly going through their resources, the Howards of Shreveport made a new appeal to the country for additional aid, declaring: ". . . the well are broken down, the poor are threatened with actual starvation, the sick and dying are about to be deprived of the commonest comforts humanity can offer them." On October 3 the commander of the United States troops in New Orleans, General W. H. Emory, telegraphed President U. S. Grant requesting permission to send 5,000 rations to the Shreveport victims; an immediate reply directed the commanding general to send the supplies at once.²⁴

The disorder of the disease-ridden city obviously provided a greater than usual opportunity for the criminally inclined. In early October, daily reports of robberies led to the formation of a citizens committee of public safety, which posted a notice on the street corners stating:

²⁴Ibid., September 28, 30, October 1, 4, 1873.

The committee of citizens on the safety of the town hereby warn all parties concerned, that any persons found depredating upon the property of our citizens will be summarily dealt with. It is our purpose to protect our city at all hazards, and evil [sic] disposed persons are warned to leave.

Although unable to prove the charge, the committee suspected four persons from New Orleans of having robbed a Catholic priest "while on his deathbed." Of the four, two men were driven out of town and warned to stay away; the third man was allowed to remain temporarily with his wife, who was then a victim of the fever.²⁵

Finally as cold weather arrived in late October and early November, the pestilence gradually subsided. Business establishments reopened one by one, cotton began to trickle in by the wagonload, and the atmosphere of utter hopelessness began to dissipate. Still the Howard Association continued to feed the poor until positions of employment materialized. By November 4 all points had removed their quarantines against Shreveport, and after a suspension of two months the trains of the Texas and Pacific Railroad once again were able to run freely to and from

²⁵Ibid., October 7, 11, 1873.

the recently plagued city.²⁶

The serious obstructions to railroad transportation posed by town, parish, and out-of-state quarantine regulations became an increasingly acute problem from the 1870's throughout the remainder of the nineteenth century. In an earlier period sporadic attempts had been made by local authorities of some towns and parishes to seal themselves off from persons and goods coming from infected areas, but seldom had the regulations been enforced stringently or absolutely. The cessation of trade in previous years had been more a matter of voluntary individual action than of official policy. But after the Civil War as railroad lines began to span the state and the country, and as the belief in yellow fever's transmission by infected persons, baggage, and goods gained widespread acceptance, people throughout Louisiana and neighboring states became increasingly afraid of its spread from New Orleans by way of the railroads.

When the news of the Shreveport epidemic spread far and near in early September of 1873, a train from the

²⁶Smith, Report of the Yellow Fever Epidemic of 1873, 11; Picayune, October 30, November 4, 1873.

infected city to Dallas was halted at the Dallas city limits by a posse of policemen and citizenry, who threatened to shoot the engineer if he tried to proceed. After detaining the train until the following morning, the posse allowed it to return whence it came. Temporarily, the Texas and Pacific obtained permission from the Mayor of Marshall, Texas, to make regular trips to that town from Shreveport provided that a physician attested to the passengers' freedom from yellow fever. On that occasion, a Dallas newspaper remarked: "Things have come to a pretty pass when the Texas Pacific Railroad corporation have to apply to the Mayor of a one-horse town for permission to run their trains."²⁷ Such commentary seems rather strange coming from a city which had assumed the privilege of denying rather than granting permission for trains to enter its jurisdiction. At any rate, railroad companies either complied with the quarantine demands of towns, whether large or small, or ran the risk of burned bridges, torn tracks, and dead engineers. By late September of 1873 there were only two mail routes out of Shreveport, both by stage: one to Monroe and another through

²⁷Picayune, September 10, 15, 1873.

Trenton.²⁸ Problems of quarantine and the transportation of passengers, freight, and the United States mail, would become increasingly entangled in the next three decades.

At the close of Shreveport's epidemic of 1873, the Shreveport Medical Society appointed a committee to investigate the origin and course of the recent scourge. The committee concluded that the disease had been imported from Havana to New Orleans, and thence transported to Shreveport by boatmen employed on the Red River packets. Since the population of Shreveport, approximately 12,000, had tripled since the last yellow fever epidemic in 1867, most of the citizens were susceptible to the disease. It was estimated that only about 4,500 persons remained in the city during the epidemic. Of that number at least 3,000 suffered attacks of the fever and about 759 died. Hence, the case fatality rate was almost twenty-six per cent. Of the population in the city at the time, approximately seventeen per cent died of yellow fever. In the opinion of the medical committee, "No epidemic in America has yet occurred to show more plainly that we are not yet masters of this fearful disease, its proper treatment and the

²⁸Ibid., September 23, 1873.

laws that govern it."²⁹

In 1873 the fever spread from Shreveport to Greenwood, Louisiana, a few miles from the Texas border; to Marshall, Texas, about forty miles west of Shreveport; and to Mansfield and Coushatta, Louisiana, south of Shreveport.³⁰ According to a resident of Coushatta, the pestilence had made "sad havoc" in the entire area of the Red River Valley. "The country looks desolate," he wrote; "worse than ever it looked during and after Bank's raid through Red River." For a distance of at least fifty miles through the valley south of Coushatta, the area was practically deserted.³¹

Yellow fever traveled up the Mississippi River as high as Memphis, Tennessee, striking that city in what was undoubtedly the most destructive epidemic in the country in 1873. Only twice previously had Memphis experienced yellow fever epidemics, in 1855 and 1867. In 1873 out of

²⁹Report of the Committee . . . on the Yellow Fever Epidemic of 1873 at Shreveport, 10, 12, 14, 20.

³⁰N. O. Med. & Surg. Jour., New Series, I (January, 1874), 626-28; Picayune, October 10, 16, 1873.

³¹Picayune, October 2, 1873.

a winter population of 50,000 only about 15,000 persons remained in the city during the epidemic, of which 7,000 had the fever and from 1,800 to 2,000 died.³²

The pestilence seemed content with only a handful of victims in New Orleans each year from 1874 through 1877, but returned in 1878 to scourge New Orleans, the Gulf States, and the entire Mississippi Valley in the most extensive epidemic the country had ever known. The visitation of 1878 also marks a real turning point in newspaper policy on reporting epidemic disease. As early as July 24 the editor of the New Orleans Picayune set forth a significant statement of policy. He admitted that both the authorities and the press heretofore had "generally refrained from specially mentioning" sporadic cases of yellow fever because of the exaggerations ordinarily resulting from such an announcement. Nevertheless, information about those cases had always been transmitted by letter-writers and by persons traveling from the city. "Hence what is not announced here has been known abroad," he said, "and the very precaution taken to avoid needless

³²N. O. Med. & Surg. Jour., New Series, I (May, 1874), 791-93; L (May, 1898), 636.

alarm and to prevent exaggerated and injurious reports has had a result the reverse of what was intended." Therefore, he believed that the Board of Health should publish all information relative to the city's health, including every death and every disease. The editor then announced that seven yellow fever deaths had occurred in the past few days, that the disease seemed to be an extremely virulent type, and that the Board of Health intended to fight its spread by disinfecting each locality where it appeared.³³ Those early "sporadic" cases soon developed into a giant of an epidemic, yet the Picayune continued to provide complete coverage on all aspects of the disaster.

Apparently the fever had been introduced in late June by the steamship, Emily B. Souder, which had stopped at Havana on the way to New Orleans. According to the quarantine physician, the vessel had a clean bill of health, except for one crew member with intermittent fever (malaria). Under those circumstances the ship was permitted to pass up to New Orleans without being detained the usual ten days. Shortly after its arrival at the city, several crew members sickened and died of yellow fever.

³³Picayune, July 24, 1878.

Some two weeks later fever cases began to appear among the New Orleans population. As the news went out, various points inside and outside Louisiana instituted rigid quarantines against the Crescent City.³⁴ Still the newspapers continued to provide what undoubtedly was the fullest reporting on any epidemic thus far; they filled their columns with yellow fever news, reports and statements from the Board of Health, the activities of the Howards and other benevolent associations, letters from readers, lists of charitable contributions from outside the state, and much editorial commentary. The journalistic revolution had finally come.

From July to mid-November the pestilence ravaged the Crescent City, resulting in well over 15,000 cases and 4,046 deaths.³⁵ Estimates of what the epidemic cost New Orleans varied from twelve million to a hundred million dollars, including such factors as the potential economic worth of persons lost to the plague and of labor diverted from productive endeavor by sickness or attendance to the

³⁴Ibid., July 25, 26, 27, 1878.

³⁵Report of the Louisiana State Board of Health for 1878, 158-59; Picayune, November 10, 1878.

sick; losses due to derangement of business, unused capital, and neglect of crops; the cost of medical attention and nursing, of funerals, of the extraordinary sanitary work of disinfection; as well as funds spent for charitable operations. The Board of Health calculated a cost to New Orleans of about twelve million dollars. Noting that the estimated profits of New Orleans' summer trade with yellow fever ports to the south only amounted to \$1,500,000, the Board lashed out at the anti-quarantinist commercial interests by commenting that New Orleans undertook a sizeable risk for the paltry sum realized from the tropical trade.³⁶

In its rampage along the Gulf coast and through the Mississippi Valley, the fever of 1878 attacked Florida, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, and Kentucky. Some cases even appeared in Cairo, Illinois; St. Louis, Missouri; Cincinnati, Ohio; and New York City. The disease spread extensively in the southern portion of Louisiana, particularly in the southeastern quarter,

³⁶United States Board of Experts, Proceedings of the Board of Experts Authorized by Congress to Investigate the Yellow Fever Epidemic of 1878 . . . (New Orleans, 1878), 31-35; Report of the Louisiana State Board of Health for 1878, 13.

affecting New Orleans, Gretna, Buras Settlement, Port Eads, St. Bernard Parish, St. John the Baptist Parish, Pontchartroula, Hammond, Tangipahoa, Clinton, Port Hudson, Bayou Sara, Plaquemine, Baton Rouge, Donaldsonville, Thibodaux, Patterson, Napoleonville, Paincourtville, Labadieville, and Morgan City. Apparently the only points in the northern part of Louisiana visited by the pestilence were Lake Providence and Delta on the Mississippi River, and Delhi, linked by railroad to Delta (and to Vicksburg across the river where yellow fever prevailed severely).³⁷ In 1878 the railroad, together with the Mississippi River and other waterways, provided transportation for the fever in its dispersion through the state and through the country. Remembering the earlier visitation of Shreveport and the Red River Valley in 1873, some of the parishes in that area applied stringent quarantine measures in 1878, which

³⁷Commercial and Statistical Almanac, Containing a History of the Epidemic of 1878, with the Best Known Remedies and Treatments of Yellow Fever . . . (New Orleans, 1879), 56; Augustin, History of Yellow Fever, 844-902; N. O. Med. & Surg. Jour., New Series, VI (November, 1878), 410; ibid., New Series, XI (September, 1883), 162; ibid., LVII (October, 1906), 291-92; Baton Rouge Advocate, November 15, 1878; Thibodaux Sentinel, September 14, October 5, November 30, 1878; Picayune, August 24, September 10, 20, 21, October 11, 1878.

might have had something to do with holding the fever out of that portion of the state.³⁸

Estimates of the yellow fever death toll in the entire country in 1878 varied from 13,000 to 20,000, out of at least 120,000 cases of the disease. Of the total death count, New Orleans supplied 4,046, and all other points in Louisiana, 1,000 to 1,500. The Board of Experts authorized by the United States Congress to investigate the epidemic of 1878 calculated the various expenditures and losses suffered from the visitation throughout the country and arrived at a sum exceeding thirty million dollars. In addition, they called attention to all the incalculable factors, such as the disturbance to business conditions and loss of capital investment in lands, houses, boats, railroads, machines, and other property unused and unproductive because of the epidemic. According to their final estimates, New Orleans alone suffered a loss of over fifteen million dollars; the nation itself, something

³⁸Police Jury Minutes, Avoyelles Parish, September 3, November 11, 12, 1878 (W.P.A. Transcriptions of Parish Records of Louisiana, Louisiana State University Archives, Baton Rouge); ibid., Rapides Parish, August 26, 27, October 9, 1878; ibid., Caddo Parish, August 23, 1878.

between one hundred and two hundred million dollars!³⁹

Not only was the visitation of 1878 the most extensive and the most costly epidemic the country had ever known, but it was also the last "Great Epidemic" in the United States. Later outbreaks destroyed only a small fraction of the number struck down by the plague of 1878. That epidemic had several important results. It stimulated a widespread public demand for the national government to enter the business of quarantine; it led to the establishment of an abortive National Board of Health, provoking an outburst of state-rights arguments; it influenced the Gulf States toward a policy of cooperation in regard to quarantine and the free exchange of information; and it intensified the scientific investigation of the disease. On the other hand, the epidemic of 1878 also heightened the fear and dread of the fever in a more extensive area than ever before, resulting in increasingly acute problems for the railroads in coping with local quarantine barriers. Although no yellow fever epidemic worthy of the name

³⁹Report of the Louisiana State Board of Health for 1878, 158-59; Commercial and Statistical Almanac, Containing a History of the Epidemic of 1878, 56; Proceedings of the Board of Experts Authorized by Congress . . . 1878, 31-35.

occurred for eighteen years afterward, the memory of '78 together with the alarm aroused over occasional cases in Louisiana or elsewhere in the South kept the interest in yellow fever intensely alive.

The summer following the disaster of 1878 witnessed an exceedingly mild flare-up of the pestilence in Louisiana. Although touching twenty-six different points in the state, mainly in the southern portion, the fever of 1879 resulted in only 162 deaths in all Louisiana, nineteen of which occurred in the Crescent City.⁴⁰ In New Orleans it was generally believed that the work of cleaning and disinfection performed by the State Board of Health and the Citizens Auxiliary Sanitary Association limited the virulence of the disease that year. In October of 1879 the editor of the New Orleans Medical and Surgical Journal suggested optimistically: ". . . our profession should feel hopeful that the day is near at hand when we will be able to effectually banish this great arch enemy to our public health, commerce and prosperity."⁴¹ The editor's

⁴⁰N. O. Med. & Surg. Jour., New Series, XI (September, 1883), 198; Report of the Louisiana State Board of Health for 1879, 8.

⁴¹N. O. Med. & Surg. Jour., New Series, VII (October, 1879), 495.

hopes seemed almost realized when during the 1880's and much of the 1890's Louisiana enjoyed an unprecedented exemption from the Saffron Scourge. From 1880 through 1896 yellow fever claimed a total of only ten victims; in eleven of those seventeen years not a single yellow fever death was reported.⁴²

Although the yellow pestilence remained in abeyance during that seventeen-year period, insofar as Louisiana was concerned, many significant developments relating to the disease occurred in the areas of public health, quarantine, and scientific activity. The Louisiana State Board of Health acquired further duties and powers and pursued a more active program of sanitation and disinfection in New Orleans. The Board also engaged in a lengthy and ultimately successful court battle with shipping lines over the payment of quarantine fees. The quarantine system itself was modified to provide for "Maritime Sanitation," that is, the thorough disinfection and fumigation of incoming vessels by a specially designed apparatus. The United States government, through the National Board of Health,

⁴²See Reports of the Louisiana State Board of Health, 1880-1896.

created in 1879, and the long-established United States Marine Hospital Service, exhibited an active interest in problems relating to yellow fever, maritime quarantine, and interstate quarantine. Special scientific commissions were appointed by the United States government to investigate the nature, origin, and transmission of yellow fever in the South and in Latin America. Designed to cooperate with state and local boards in maintaining adequate maritime quarantine, the National Board of Health encountered many obstacles, not the least of which was the Louisiana State Board of Health. In a bitter fight to the finish, the National Board went down, partly because of intense opposition to federal interference with state quarantine powers, partly because of administrative difficulties. After the failure of the National Board, the federal government did not retreat completely from the scene, but rather entrusted to the United States Marine Hospital Service the duty of cooperating with state and local boards in the work of preventing or fighting epidemic disease. In 1897 that agency would render a valuable service in providing for inspection of passengers and merchandise on railroads and helping to untie transportation entanglements.

In an attempt to remove the need for federal action in the realm of quarantine, conferences were held among representatives of various state and local boards of health in the yellow fever areas. The local and state boards attempted to provide for strict maritime regulations to hold out the disease and agreed upon the free exchange of information regarding health conditions to prevent unnecessary interstate quarantines based on groundless rumors of disease. In addition, attempts were made to establish a set of rules permitting certain types of merchandise, considered incapable of bearing yellow fever germs, to flow freely through the channels of interstate commerce during epidemic seasons. In the 1880's several bitter controversies developed in the Gulf States over the diagnosis of cases resembling yellow fever. Sometimes the fight broke out among members of a local or state board examining the case; sometimes between the National Board representative and the state board; sometimes among the representatives of various state and local boards sent into an area to investigate suspicious cases. Under circumstances characterized by confusion and recriminations, the problems of interstate and intrastate quarantine were by no means settled.

During the 1880's and 1890's several different men discovered several different germs, each of which was proclaimed as the cause of yellow fever. An intense medical controversy developed as physicians lined up in support of their favorite germ, or attempted to discount the entire lot. In the midst of all the interest in germs and disinfection, the hypothesis advanced by the eccentric Cuban physician and scientist, Carlos Finlay, naming the culex mosquito as yellow fever's transmitter, was largely overlooked--until 1900 when the Reed Commission established its validity. The period between the epidemics of 1878 and 1897 was without question a lively era, when the subject of yellow fever sparked much activity in the public health, quarantine, and scientific fields.

After a lengthy respite from epidemic yellow fever, in 1890 the editor of the New Orleans Medical and Surgical Journal remarked: "It is now so long a time since the last epidemic that many of our younger medical men who have practiced in this city during the past decade have never seen a case of yellow fever in their lives." During the past twelve years, he said, the few cases that slipped through quarantine had been discovered, isolated, and disinfecting rapidly and effectively by the Board of Health,

thereby preventing the fever's spread. Although praising New Orleans for its success in combating yellow fever, the editor strongly emphasized the necessity of constant vigilance.⁴³

From 1890 through 1896 not a single case appeared in the Crescent City; then in 1897 the infection slipped in through a side door. Early in August of 1897 an epidemic disease resembling dengue and malaria broke out in Ocean Springs, Mississippi. Later in the month when several deaths resulted, the Louisiana State Board of Health sent over a commission to investigate the nature of the malady. The commission first declared it dengue fever. Shortly thereafter, more deaths occurred, and several cases exhibited black vomit. A second commission from the Louisiana State Board went over and this time pronounced the prevailing disease yellow fever, in concurrence with representatives from several other state boards. Immediately, a Louisiana quarantine was proclaimed against the Mississippi coast resorts, but it came a few days too late to prevent the alarmed summer visitors at Ocean

⁴³N. O. Med. & Surg. Jour., New Series, XVIII (December, 1890), 483-84.

Springs from boarding the first trains home to New Orleans and elsewhere.⁴⁴ On September 6 the Louisiana State Board of Health recorded the first yellow fever death in New Orleans in six years, a boy who had returned to the Crescent City from Ocean Springs, Mississippi.⁴⁵

By September 10 several cases of fever, all traceable to Ocean Springs, had appeared in one city block. The Board of Health arranged for the isolation of the area, stationed sanitary guards in front of the infected houses with orders to permit no person to enter or to leave, and arranged for the inspection and disinfection of the entire neighborhood where the disease had occurred. As cases continued to break out, the Board ultimately commissioned nearly 700 sanitary officers to enforce a policy of house quarantine, never before employed in a yellow fever epidemic. The officers were ordered to allow no person to enter or leave the infected premises without explicit permission from the Board, to forbid pedestrians to gather about the area, and to arrest and send them to jail if necessary. Furthermore, the sanitary guards were

⁴⁴Ibid., L(October, 1897), 263-64.

⁴⁵Picayune, September 7, 1897.

instructed to remain constantly at the post until relieved, to transmit all orders from the household for groceries and other necessities, and to insist upon absolute non-intercourse.⁴⁶

Enforced throughout the epidemic, the Board's policy of house isolation aroused considerable opposition among many citizens of New Orleans. Some persons even consulted their lawyers on the possibility of enjoining the Board or securing a writ of habeas corpus to obtain release from "enforced imprisonment," on the grounds that no one could be deprived of his liberty without a fair trial. The Picayune editor strongly supported the position of the Board, believing that the public health of the many should predominate over the unreasonable demands of the few. At a meeting of the Board of Health, one member, Dr. Felix Formento, proposed that house quarantine regulations be modified to apply only to the sick and their immediate attendants and not to every individual in the house. "The right of free ingress and egress of every citizen to his own home should not be denied," he insisted. Nevertheless, the Board rejected his proposal and decided in favor of

⁴⁶Ibid., September 10, 18, October 9, 1897.

continuing the system as originally conceived. When many New Orleanians persisted in violent attempts to defy the health regulations, the attorney of the Board issued a public statement on the matter. The policy was based on an ordinance dating back to 1879, he said, which provided for the regulation of entry to and departure from infected buildings, vessels, or areas, as well as for their fumigation and detention. Infected houses had been isolated and marked with flags many times before in dealing with diphtheria, scarlet fever, smallpox, leprosy, and other infectious diseases. The attorney thought it strange that those diseases, although less malignant than yellow fever, inspired more fear in the New Orleans populace than the Saffron Scourge. "Men will walk four squares to get out of the way of a smallpox flag who would not pay any attention to a yellow fever flag," he said. Apparently the New Orleans public failed to "share the universal belief about its [yellow fever's] danger." According to the attorney, their attitude proved the old saying that familiarity breeds contempt.⁴⁷ Still the opposition continued. In their determination to avoid house quarantine, many persons

⁴⁷Ibid., October 1, 2, 6, 1897.

concealed yellow fever cases among their families and adamantly refused to call in medical aid. Frequently, the inhabitants of quarantined houses successfully defied the guards by sneaking out through rear exits.⁴⁸

On October 10 the Picayune published a letter to the editor which read: "I am an old resident of this city, having gone through all the epidemics, and have never seen such tomfoolery carried on, as flagging houses and having old politicians stationed in front of doors, as if their presence could prevent the spread of fever." Furthermore, the reader felt that "reckoning the new cases" day by day made conditions seem worse than they actually were. He asked, ". . . why demoralize a whole community, because a few people have fever?" The Picayune editor answered that conservatism in certain areas represented "the highest sort of civilization," but he considered it nothing less than foolish to turn down the benefits of scientific advancement. After thirty-four days of yellow fever in the city, only fifty-six deaths and about 500 cases had occurred; still a few "conservatives" wanted a return to the

⁴⁸New York Times, October 26, 1897.

"good old days" when the fever raged without obstruction.⁴⁹

At one point, the Board decided to abandon the posting of the red and yellow quarantine flags at infected houses because of the tremendous prejudice against them. However, their attorney reminded them that the flags were mandatory by a city ordinance of 1896 and a state law of 1882. Continuing his vehement opposition to the whole operation, Dr. Formento demanded that the house guards be removed, even if the flags had to remain. The other Board members admitted that persons within the enclosures were forced to abandon their jobs for several weeks, but they pointed out that credit was readily available and that it was completely justifiable to inconvenience some 1,200 persons in the interest of 260,000. In spite of the tremendous pressures brought to bear on the Board, it held firm until the second week of November. When cold weather ended further danger from the disease, the Board withdrew the quarantines, but continued to disinfect premises where the fever had occurred.⁵⁰

⁴⁹Picayune, October 10, 1897.

⁵⁰Ibid., October 22, 23, 28, 29, 31, November 1, 2, 12, 1897.

Although some New Orleanians violently opposed the practice of house isolation, many persons in the city accepted the idea of cleansing and disinfection as preventive measures. Early in the epidemic a Citizens Committee on Sanitation organized and made plans for residents in each block to organize and cooperate in cleaning their premises and the streets. The Board of Health agreed to supply the disinfectants free of charge if the citizens furnished the labor. According to plan, citizens in various wards throughout the city established voluntary sanitary associations to cooperate with the Board in the work of inspection, cleaning, and disinfection.⁵¹ While commending these voluntary efforts, the editor of the New Orleans Times-Democrat called attention to the slum areas where appeals for voluntary cleansing brought slight response. Long accustomed to filth, unaware of its possible dangers, and overworked to earn a bare subsistence, the slum inhabitants could scarcely be expected to participate enthusiastically in a voluntary clean-up campaign. The editor strongly recommended that the city authorities

⁵¹Ibid., September 19, 28, 29, 1897.

undertake the task of cleaning those danger spots.⁵²

On one occasion during the epidemic, in trying to execute a public health measure, the health authorities and the mayor encountered extreme opposition in the form of mob violence. On the one hand, the incident seems to contradict the idea that New Orleanians had little fear of yellow fever; on the other, it may indicate something entirely different. It all started on September 17 of 1897 when the Board of Health decided to establish a yellow fever hospital in the old marine hospital building on Tulane Avenue, offered for such use by the city government. Appalled by the idea, the residents in the neighboring area presented a petition to the Board requesting that some location outside the city be selected instead. Agreeing to reconsider, the Board decided on September 19 to use the old hospital building as a detention hospital instead where indigent persons from crowded, infected localities might be kept for a time, and if yellow fever failed to develop they could be released. The new plan was no more satisfactory to the protesting citizens than

⁵²New Orleans Times-Democrat, September 22, 1897.

the old had been. That night "an indignation meeting" of over a thousand persons, called by the ex-councilman from the third ward, gathered on the corner of Tulane Avenue and Broad Street. The group elected officers, listened to several "incendiary" speeches, and passed resolutions to be presented to the mayor on the following morning. They protested the proposed detention hospital, which "would not only ruin all property interests in that section," but would probably spread the disease through the area. The resolutions warned the public officials that such a project tested "the patience of many good citizens." Mayor Walter C. Flower received the resolutions on the morning of September 20 together with the suggestion of Oakland Park as a detention area. He was able to obtain the temporary use of Oakland Park, thereby appeasing the third ward citizens and at the same time attaining the detention area desired by the Board of Health.⁵³ Thus a fortunate compromise had soothed the ruffled feelings and kept the peace, but not for long.

Although a detention camp had been provided for, a yellow fever hospital was still needed to keep indigent

⁵³Picayune, September 18, 19, 20, 21, 24, 1897.

yellow fever patients from spreading the disease to other patients in Charity Hospital. Several days after the original crisis, Mayor Flower secured the Beauregard School Building, a large airy structure located in the center of an otherwise vacant square, for use as a temporary hospital for destitute yellow fever patients. The announcement of this project provoked another uproar. A crowd of four or five hundred persons, consisting of "some substantial citizenry" and many of the "rabble," assembled in front of the school around 6 P.M. on the evening of September 23. At the time, a physician from Charity Hospital and several Sisters of Charity were preparing the school for use as a hospital. According to the Picayune, several politicians were involved in the gathering, just as the ex-councilman had led the earlier protest, obviously for reasons that had little to do with yellow fever. The unruly crowd listened to speeches and heard arguments advanced against the hospital. Various speakers suggested that it was an attempt to make that portion of the city "the dumping ground for every sort of undesirable thing that came along," that it was not only an outrage but a threat to the entire vicinity, and that the lives of the nearby residents and their families were at stake. A committee from the

assembly entered the school building to request that preparations be halted until the mayor could be consulted.

Attempting to placate the "indignant populace," the Charity physician in charge and the Sisters agreed to evacuate the building for the night, but even after they left the scene most of the crowd stayed on. Some left, others arrived, and late into the night they milled about on Canal Street in front of the school, built bonfires in the street, and continued to talk angrily about the proposed hospital.

Some eight or ten policemen hovered around the area, watching the group of demonstrators. Some of the comments overheard by a Picayune reporter mingling with the group reflected an undercurrent of class-consciousness; for example, "Why don't they make a hospital out of some of those schools up in the rich and stylish neighborhood?" According to the reporter, some "responsible" persons remained in the crowd, although it consisted mainly of "toughs" of the third and fourth wards. The physician who had been persuaded to leave the building said later that most of the people in the mob resided some distance from the school, and why they should be afraid of the infection

was a mystery.⁵⁴

Eventually someone suggested that the place be burned down, and for a while this idea was passed about and discussed within the clusters of angry citizens. Shortly after midnight several unidentified persons, unnoticed by the few scattered policemen, managed to sneak onto the school ground and set fire to two outbuildings behind the school, the kindergarten and the residence of the portress. Firemen rushed to the scene, but encountered the obstruction of the mob, which cut the fire hoses and posed every possible hindrance to keep the fire wagons from reaching the burning buildings. Police reinforcements finally arrived, and the firemen ultimately put out the flames, but not before the two outbuildings had burned to the ground. Happily, the school building itself suffered only slight damage.⁵⁵

On the following day when the committee of "responsible" citizens representing the not-so-peaceable assembly

⁵⁴Report of the Board of Administrators of the Charity Hospital to the General Assembly of the State of Louisiana for 1897 (New Orleans, [1898]), 11-12; Picayune, September 24, 1897; N. O. Med. & Surg. Jour., I (October, 1897), 262.

⁵⁵Picayune, September 24, 1897.

of the preceding night arrived at the mayor's office to register a protest against the hospital, Mayor Flower chastised them severely for not having used their influence to call a halt to the mob activity and concluded the interview with this statement: "Gentlemen, Beauregard School will be used." In a conference with the police chief, the mayor made special preparations to handle any further mob action. By the evening of September 26 the temporary fever hospital was ready for patients, guarded by police forces both day and night.⁵⁶ On the surface, this incident seems to reflect a violent fear motivating large numbers of people to rise up in protest. Actually, it seems that ward politicians had something to do with engineering the gatherings, perhaps as a forum for demagoguery and reputation-building. Playing upon a fear of the fever, however great or slight, playing upon the class-consciousness of that section of the city, politicians provided an outlet for whatever tensions or frustrations might have existed because of the epidemic and created a situation which, like all mob scenes, escaped their ultimate control.

⁵⁶Ibid., September 25, 26, 1897.

In many parts of the state outside of New Orleans other incidents of violence or threatened violence occurred in maintaining local quarantines, episodes in which fear was definitely a factor. The year 1897 was truly the year of the shot-gun quarantine. Between intra-state and interstate quarantine barriers, the railroads were caught in an incredibly complex predicament. At the onset of the epidemic, neighboring states as well as the Louisiana interior raised absolute quarantine barriers against persons and merchandise from New Orleans and other infected points. Many areas would not even allow trains to run through at their highest possible rate of speed.⁵⁷ People throughout the Gulf States area and the Mississippi Valley feared that this first epidemic since 1878 might turn into a repeat performance of that widespread disaster; panic-stricken, they were determined to prevent the introduction of the disease if at all possible.

Providing full news coverage of the exciting 1897 epidemic, the New York Times reported on September 15 that New Orleans was "so tightly tied up" that "there is no longer any commotion created when this, that, or another

⁵⁷Ibid., September 17, 1897.

town institutes quarantine." Within a radius of one thousand miles, "every town and hamlet has emphatically refused to have any intercourse with the city."⁵⁸ The New Orleans Times-Democrat, like other New Orleans papers, complained indignantly of the quarantine imbroglio and suggested the advantages of state control of quarantine regulations in preference to local action. By the third week in September, some of the interior towns had begun to suffer shortages of food and other supplies because of their self-imposed isolation. Finding it impossible to run trains profitably while complying with the multitudinous regulations of intrastate and interstate quarantines, many railroads temporarily abandoned some of the lines. On September 18 the Texas and Pacific managed to run a train through from New Orleans to Shreveport, but was allowed to stop only at a few points along the way. Most villages would not even accept mail from the train.⁵⁹

Representatives of the United States Marine Hospital Service in cooperation with the railway mail service attempted to institute measures for clearing the mail routes.

⁵⁸New York Times, September 15, 1897.

⁵⁹Times-Democrat, September 13, 20, 1897.

They set up a formaldehyde apparatus in New Orleans to fumigate letters and parcels for the purpose of killing the "yellow fever germs." Dr. Henry R. Carter of the Marine Hospital Service came to New Orleans to establish an inspection service on the railroads and attempt to raise the barriers against freight and passengers from New Orleans. In his own words, "My orders are to organize train inspections to the borders of Texas, Arkansas, Tennessee and Georgia, passing through Alabama and Mississippi. It is useless to attempt anything in the latter two states, for the people are wild, panic-stricken." The Mississippi Board of Health would permit no train passenger to get off at any point within the state. Persons wanting to get on a train might do so, but once aboard they had to continue beyond the borders of Mississippi. Dr. Carter planned to appoint physicians as railroad inspectors to indicate to local authorities at each point along the way which passengers had been given health certificates. He hoped this measure would bring about a relaxation of the prevailing shot-gun quarantines.⁶⁰ Within a week a number of Louisiana towns had agreed to accept freight from New Orleans, if

⁶⁰Picayune, September 17, 1897.

declared non-infected by the United States Marine Hospital Corps, although, for the most part, passengers from the Crescent City continued to be rejected.⁶¹ With the lack of uniformity in local regulations, however, and with many towns prohibiting trains passage through their jurisdictions, traffic was still hopelessly entangled.

In late September Dr. S. R. Olliphant, President of the State Board of Health; Drs. John Guiteras and Henry R. Carter of the United States Marine Hospital Service; and a representative of the Southern Pacific Railroad set out from the Crescent City on the Southern Pacific road in an attempt to clear a path westward to Lake Charles. They had invited local health authorities to board the train as it passed through their towns and a health officer from Texas to join them in Lake Charles, not far from the Texas border. Once in Lake Charles, the various health officials would attempt to open the Southern Pacific line for freight shipments from New Orleans to Texas, with inspection and supervision to be provided by the United States Marine Hospital Service. It had been planned that after completing the arrangements at Lake Charles, the group would travel

⁶¹Times-Democrat, September 26, 1897.

north to Shreveport and return to New Orleans on the Texas Pacific line in an attempt to clear the barricades from those roads. Unfortunately, the whole project failed. From New Orleans through Lafayette, the plan worked well. Proceeding west of Lafayette, however, the train was met and halted at the Acadia Parish line by a party of armed citizens from the town of Rayne. They allowed no one to step off the train, they threatened to tear up the tracks, and they forced the train to return whence it came. Meanwhile, a message from Lake Charles had declared it impossible for the health conference to meet in that area, and telegrams from Opelousas and from the parish authorities along the Alexandria branch of the Southern Pacific denied permission for the train's progress northward from Lafayette along that route. Hence, the well-intentioned congregation of officials found it necessary to return to New Orleans without having accomplished their mission on the western or the northwestern railroad channels. Dr. John Guiteras commented later that in all his travels throughout the civilized world he had never met "a more demented set of people" than the armed posse from Rayne. "They were

scared to the very confines of stupidity," he said.⁶²

Unlike many other newspapers, the Baton Rouge Advo-
cate did not condemn the action of the Rayne citizens as
mob violence. Since the group had been led by the mayor,
said the editor, it was simply a delegation with every
legal right to enforce the town quarantine powers autho-
rized by previous legislative enactment. Although uphold-
ing the legality of the action, the editor questioned the
necessity of turning back the expedition. The train could
have "thundered through" the area at the tremendous speed
of forty miles per hour, he declared, without danger of
infection to any citizen of the parish, and the projected
conference of health authorities might have accomplished
something of value to science and commerce. Nevertheless,
the Baton Rouge paper continued to support the right of
local quarantine, denouncing certain businesses in New
Orleans for calling country people cowards if they refused
to buy New Orleans goods. Since early in the outbreak, the
capital city itself had instituted rigid barriers against
persons, baggage, and freight from all infected districts.
Volunteer guards were posted on every road leading into

⁶²Picayune, September 30, October 1, 1897.

the city, at the ferry landing, the steamboat wharf, and the railroad depot. Late in October a few cases appeared in Baton Rouge, but rigid isolation of cases and all those exposed to them was immediately effected, and no serious epidemic ever materialized.⁶³

Even where local health authorities had opposed quarantining against New Orleans, public pressure was frequently such that the measures had to be instituted. For example, when the news of the first few yellow fever cases in New Orleans reached Natchitoches in 1897, the town board of health wanted to postpone quarantine for a time, but the citizenry, plagued by the memory of 1853 and 1878, demanded that the barriers be established immediately.⁶⁴

In late September the Picayune editor described the impossible situation created by the "wild and furious panic that has stopped the currents of trade, prevented the transit of passengers and the mails from one part of the Union to another, and has armed the population with deadly weapons and has set them at ferocious enmity against every

⁶³Baton Rouge Advocate, September 18, October 2, 23, 30, November 6, 1897.

⁶⁴Shreveport Journal, September 13, 1897.

man, woman and child found outside their cordons of shot-guns."⁶⁵ Eventually some people began to blame the economic blockade on the reporting of New Orleans papers. They suggested that if the journals had remained silent on yellow fever, business would have continued without interruption. The Picayune editor thought it incredible that anyone could entertain "such an erroneous and out-of-date notion in this age of telegraphing and eager search for and dissemination of news." Twenty years before, no federal health supervision had existed, "nor was the South gridironed with railways and spiderwebbed with telegraph wires as at present."⁶⁶ With the New York Times carrying full accounts of the various incidents of the epidemic one day after their occurrence, it is unlikely that the fever could have been concealed for long.

A time had existed, said the New Orleans Times-Democrat, when it was universally believed that nothing could stop the United States mail. Now the mail was quarantined by "the pettiest village and hamlet," excluding not only their own mail, but also keeping the mail from passing

⁶⁵Picayune, September 29, 1897.

⁶⁶Ibid., October 13, 1897.

through their limits for destinations elsewhere. Although a "bonanza" to Western Union, such a situation was truly deplorable. The fumigation and disinfection process helped matters somewhat, but failed to solve the problem entirely.⁶⁷ Late in October when conditions remained essentially unchanged, the Picayune noted that the damage of the epidemic of 1897 came not from the mild type of prevailing fever, but from "the arbitrary and illegal stopping by wayside villagers of the United States mails, and the trains of great trunkline railways carrying interstate travel and commerce." Such action, said the editor, was clearly against the law; communities might forbid trains to unload passengers or goods in their jurisdictions, but had absolutely no right to prevent trains from proceeding to some point beyond. In the editor's opinion, the proper remedy was to be sought in the Federal courts--a radical stand for the states-rights Picayune. Earlier the New Orleans Board of Trade had requested first the President of the United States, then the Governor of Louisiana, to employ force to break the blockades. Both had replied that they lacked authority to use force for that purpose.

⁶⁷Times-Democrat, September 22, 1897.

The Picayune editor suggested that the first appeal should have been made to the United States courts for action against the illegal obstructions to mail and interstate commerce. When the courts issued injunctions and the injunctions were disregarded by the shotgun quarantinists, then the power of the army might be used to enforce the court orders. Apparently this approach was never employed. By late October the restrictions gradually began to ease up and it became possible to ship certain kinds of merchandise to a number of places in Louisiana, but not before another outrage had occurred. A bridge on the Southern Pacific Railroad line east of Lake Charles burned one night shortly after an assembly of citizens in Calcasieu Parish had resolved that Southern Pacific trains would not be allowed under any circumstances to enter the parish -- "a significant coincidence."⁶⁸

On November 12, 1897, the State Board of Health declared all danger of infection over and removed the fever flags and house guards, setting an example for other areas to follow. On November 15 a newspaper headline read, "Quarantines Still Tumbling." Texas had removed all

⁶⁸Picayune, October 22, 24, 29, 1897.

restrictions and various points in Louisiana gradually followed suit. By mid-November mail disinfection was discontinued, and the Marine Hospital Service made plans for terminating its inspection and freight fumigation service within a short time. As late as November 24 when the Marine Hospital Service finally ended its work, several parishes still maintained quarantines against the railroad lines, but they too would soon be removed.⁶⁹

In further cooperation with the state authorities in coping with problems arising from the epidemic, the United States Marine Hospital Service had established several detention camps in the neighborhood of New Orleans. By early October, a camp at Fontainebleau, across Pontchartrain from New Orleans, began to accept fifty people a day approved by the State Board. In this manner, any person wanting to leave the Crescent City might go to Fontainebleau, remain ten days, and obtain a health certificate from the Marine Hospital Service. By this time the certificates were acceptable in Mississippi, Alabama, and Tennessee.⁷⁰ To facilitate the transportation of skilled

⁶⁹Ibid., November 12, 15, 24, 1897.

⁷⁰Ibid., October 2, 1897.

and unskilled laborers from New Orleans to the sugar plantations of the state, the Marine Hospital Service authorities provided for their detention and certification at Camp Hutton in nearby Jefferson Parish. Late in October with a clean bill of health, many workers set out by boat for plantations in Lafourche, Ascension, Iberville, Assumption, and West Baton Rouge parishes.⁷¹ When the United States Marine Hospital Service brought its work to a close in late November of 1897, its officers had performed a number of valuable services for New Orleans, Louisiana, and other parts of the country as well, including passenger and freight inspection and fumigation services on the railroads, mail fumigation, as well as the supervision of detention camps. Although many local quarantines failed to give an inch throughout the entire season, others had been modified to some extent at the suggestion of the government agency.

Never before in yellow fever's history had so mild an epidemic created so much panic and confusion. The pestilence appeared in forty-one different places throughout the South, but the total deaths in all places amounted

⁷¹Ibid., October 20, 21, 22, 24, 1897.

to the paltry sum of 454. New Orleans reported 1,908 cases and 298 fatalities, almost three-fourths of the total yellow fever mortality in the country. Although several cases appeared in Baton Rouge, Clinton, Franklin, and Patterson in Louisiana, only about ten yellow fever fatalities occurred in the entire state outside of New Orleans.⁷²

Compared with previous epidemics, the outbreak of 1897 was unusually tame, yet it aroused more terror through the countryside than ever before. Even in New Orleans greater fear than usual found expression in the opposition to a yellow fever hospital--to whatever degree the mob incidents represent fear rather than other frustrations. In countless epidemics before, yellow fever hospitals had been established in New Orleans without provoking noticeable opposition. But nineteen years had passed, almost free from the disease, and perhaps as it became a less familiar foe, it also became a more dreaded one. On the other hand, as it has been suggested, city politics and class-consciousness might well have played the major role

⁷²N. O. Med. & Surg. Jour., L (May, 1898), 635; Report of the Louisiana State Board of Health for 1896-1897, 85; Picayune, October 19, November 23, 1897; Augustin, History of Yellow Fever, 845, 853, 894.

in that expression of mob protest. The violent opposition in some quarters to the Board's policy of house isolation and quarantine flags and the concealment of cases rather than submitting to health regulations seem to indicate greater fear of official measures than of the disease itself. However New Orleanians might have felt about the disease, other parts of the state and country were obviously terrified. Nineteen years had gone by since the Great Epidemic of 1878, so well-remembered by many; those too young to remember had heard the story told and re-told until the legend became even more dreadful than the reality. Hence, the one abiding thought outside the originally infected areas was to prevent the entry of the fever if at all possible. Although some of the restrictions were unnecessarily harsh, undoubtedly the absolute quarantine against passengers kept the pestilence away from many small towns along the railroad lines where otherwise it might have spread.

An elderly physician of New Orleans, Dr. Just Touatre, called attention to an extraordinary feature of the 1897 epidemic: "For the first time in the history of yellow fever, it came, [to New Orleans] this year, via the railroad." Always before it had come by way of the

river.⁷³ While the Louisiana State Board of Health maintained a firm grip on the quarantine door of the Mississippi River and other Louisiana points of entry from the south, the yellow fever of 1897 had crept into the country at some other port of entry, and into New Orleans from Ocean Springs, Mississippi, by the railroad. At least two loopholes were later suggested as the means by which the fever entered American territory: the Ship Island quarantine off the Mississippi coast where Cuban refugees sometimes slipped through, or Mobile's lax quarantine system, allegedly designed to divert the Central and South American trade from the port of New Orleans.⁷⁴

Although praiseworthy for its cleansing and fumigation system, Louisiana's quarantine program still was not based on those principles necessary to prevent the introduction of the fever. Placing their faith in disinfection and fumigation rather than adequate detention, the Board unwittingly left open the gate to cases of yellow fever. Although apparently in perfect health at the moment of arrival, a crewman or passenger might well be carrying the

⁷³Picayune, October 24, 1897.

⁷⁴N. O. Med. & Surg. Jour., L (October, 1897), 265.

yellow fever virus within his system only to come down with the fever within a day or so after reaching the Crescent City. At any rate, the Saffron Scourge reappeared in Louisiana in 1898 and 1899. Both outbreaks, however, were even less destructive than the mild epidemic of 1897.

In mid-September of 1898 when the first case was reported in New Orleans, the State Board of Health telegraphed the information to the health boards of neighboring states and to the United States Marine Hospital Service. Absolute quarantines again were established against New Orleans. However, since some areas accepted the set of regulations agreed upon by an interstate assembly of health officials at Atlanta in April of 1898, freight traffic was not entirely suspended. The people of the southern states exhibited less panic than in the previous year; perhaps because the fever of 1897 had not lived up to their original expectations. In 1898 New Orleans reported 118 cases in all, with fifty-seven deaths. Although mild, the fever of 1898 spread extensively in Louisiana. Cases appeared in Franklin, Houma, Baton Rouge, Wilson, Clinton, Plaquemine, Litcher, St. James Parish, Jackson, East Feliciana Parish, West Feliciana Parish, Alexandria, Bowie, Iberville Parish, St. Charles Parish,

Lake Charles, Slaughter, Morrow, and other towns and parishes, mainly in the southern portion of the state.⁷⁵

The fever of 1899 claimed only twenty-three lives in New Orleans, and a few cases occurred in Plaquemines Parish, St. Charles Parish, and Baton Rouge. Again the familiar quarantines were applied within and without the state. For the most part, however, freight shipments continued under the Atlanta Regulations of 1898. Northern and central Louisiana quarantined against New Orleans, but almost the entire southern and eastern portion manifested confidence in the State Board to handle the situation properly and withheld their local restrictions.⁷⁶

The first half of the nineteenth century had witnessed a steady increase in the frequency and virulence of yellow fever; the 1850's marked something of a climax of its activities. In the last forty years of the century, although expected each year, the scourge struck rarely, and with two exceptions (1867 and 1878), lightly. The

⁷⁵Report of the Louisiana State Board of Health for 1898-1899, 45, 46; N. O. Med. & Surg. Jour., LI (October, 1898), 209.

⁷⁶Report of the Louisiana State Board of Health for 1898-1899, 47, 242.

decline of the pestilence coincided with increasingly positive action by Louisiana health authorities in the areas of sanitation, disinfection, and fumigation, as well as "Maritime Sanitation"--that is, the modified quarantine program. Although fallacious insofar as yellow fever was concerned, the conclusion that the sanitary efforts deserved credit for reducing the incidence of the pestilence undoubtedly won increased support for a stronger and more active Board of Health and indirectly resulted in a more favorable climate of opinion for the concept of public health. For whatever reason, known only to the virus itself, by the 1890's the fever exhibited a less virulent character than in previous years. A Louisiana historian, writing in 1903, dismissed the visitation of 1897 with this brief statement: "There was an epidemic, called by some yellow fever, in New Orleans in 1897; but the fever was so mild and the mortalities so few that the disease was known by the name of 'yellowoid.'"⁷⁷ By 1899, not only had yellow fever diminished in virulence, but its secret mode of transmission by the familiar pest, the Aedes aegypti mosquito,

⁷⁷Fortier, A History of Louisiana, IV, 232-33.

was soon to be discovered and proved beyond any reasonable doubt. The final conquest of the scourge of New Orleans, the South, and Latin America was just around the corner when the twentieth century arrived.

YELLOW FEVER MORTALITY IN NEW ORLEANS, 1867-1899

<u>Year</u>	<u>Number of Deaths**</u>	<u>Population (Approx.)</u>
*1867	3,320	181,000
1868	3	
1869	3	
-1870	587	192,000
1871	54	
1872	39	
-1873	226	199,000
1874	11	
1875	61	
1876	42	
1877	1	
*1878	4,046	211,000
1879	19	
1880	2	
1881	0	
1882	4	
1883	1	
1884	1	
1885	1	
1886	0	
1887	0	
1888	0	
1889	1	
1890	0	
1891	0	
1892	0	
1893	0	
1894	0	
1895	0	
1896	0	
*1897	298	285,000
1898	57	
1899	23	

*Major epidemics.

**From Board of Health figures.

DISTRIBUTION OF YELLOW FEVER IN LOUISIANA OUTSIDE OF NEW ORLEANS, 1867-1899*

<u>Places</u>	<u>1867</u>	<u>1870</u>	<u>1873</u>	<u>1878</u>	<u>1879</u>	<u>1897</u>	<u>1898</u>	<u>1899</u>
Alexandria	x						X	
Baton Rouge				X		X	X	X
Coushatta			X					
Delhi				X				
Delta				X				
Donaldsonville				X				
East Feliciana Parish				X		X	X	
Greenwood			X					
Gretna				X				
Hammond				X				
Houma							X	
Jackson							X	
Jeanerette	X							
Labadieville				X				
Lafayette	X							
Lafourche Crossing					X			
Lake Charles	X						X	
Lake Providence				X				
Mansfield			X					
Napoleonville				X	X			
New Iberia	X	X						
Opelousas	X							
Paincourtville				X				
Plaquemine	X			X			X	
Plaquemines Parish				X				X
Ponchatoula				X				
Port Barre		X						
Port Hudson				X				

<u>Places</u>	<u>1867</u>	<u>1870</u>	<u>1873</u>	<u>1878</u>	<u>1879</u>	<u>1897</u>	<u>1898</u>	<u>1899</u>
St. Bernard Parish				X				
St. Charles Parish							X	X
St. James Parish							X	
St. John the Baptist Parish				X				
St. Martinville	X							
St. Mary Parish	X			X	X	X	X	
Shreveport	X		X					
Tangipahoa				X				
Thibodaux				X	X			
Vermillionville	X							
Ville Platte		X						
Washington	X							
West Feliciana Parish				X				
Wilson							X	

*Yellow fever also occurred in many small towns in Louisiana not included in the list. This chart is intended as a representative picture of the major areas affected, and not an exhaustive listing.

CHAPTER VI

THE LAST EPIDEMIC, 1905

Yellow fever appeared in New Orleans only once after 1899--for the last time. The epidemic of 1905 was not only the last outbreak of the yellow pestilence in the Crescent City, but also the last yellow fever epidemic in the United States. By this time the Saffron Scourge was operating under a grave disadvantage: its heretofore secret mode of transmission had been discovered. In the latter nineteenth century the United States government had commissioned several individuals and expeditions to investigate the yellow fever mystery, but without positive results. The Spanish-American War in 1898 and the subsequent military occupation of Cuba brought the American forces in contact with the yellow foe in its own territory, where it had prevailed as an endemic disease for many years. In 1900 a commission of United States Army surgeons went to Cuba on a special assignment: Operation Yellow Jack. Chairman Walter Reed and his associates (James Carroll,

Jesse W. Lazear, and Aristides Agramonte) followed the path suggested long before by Carlos Finlay. By using the Aedes aegypti mosquitoes which Finlay made available to them, they successfully demonstrated the role of the mosquito as the vector of yellow fever. In October of 1900 they made a tentative announcement of their findings, and after further experimentation issued a full report in the spring of 1901, stating that yellow fever was transmitted by the Aedes aegypti mosquito and only in that manner.¹

One might have expected that the announcement of this significant discovery would have stimulated the people of New Orleans and elsewhere in the South to embark immediately upon an anti-mosquito crusade to eliminate the possibility of future outbreaks. Such was not the case. Many persons refused to believe that the small, familiar pest, offensive and annoying though it might be, was actually the agent of the dreaded pestilence. Even the medical profession was divided; many who accepted the theory did so with reservations. The editor of the New Orleans Medical and Surgical Journal in April of 1901 felt that it was too soon to consider the mosquito the only

¹Winslow, Conquest of Epidemic Disease, 352-54.

means of yellow fever transmission, although he did believe in the "urgent necessity" for eradicating the culprit and recommended a public campaign toward that end.²

In its report for 1900 and 1901 the State Board of Health discussed the conclusions of the Reed Commission. Although admitting that the mosquito had been demonstrated as one factor in the conveyance of yellow fever, the Board stated that "we Southern Health Officers, charged with the grave duty of protecting our people against this most dreaded of all diseases, are unwilling to accept the dictum of the experimenters that yellow fever can be conveyed by no other agency." They were not yet prepared to give up the theory of the fever's spread by means of fomites, that is, substances capable of absorbing germs, such as woolen fabrics or articles of clothing.³

On the other hand, the New Orleans City Board of Health (created in 1898) and the Orleans Parish Medical Society exhibited considerable interest in the mosquito theory and shortly after the announcement of the theory

²N. O. Med. & Surg. Jour., LIII (April, 1901), 595.

³Report of the Louisiana State Board of Health for 1900-1901, 77-79.

began to take steps to investigate breeding places of the Aedes aegypti in New Orleans for the purpose of eradicating the species. Dr. Quitman Kohnke, chairman of the City Board of Health, had been thoroughly impressed by the striking results of William Gorgas' anti-mosquito campaign in Havana in 1901, and under Kohnke's leadership the City Board spearheaded a similar movement in New Orleans as early as July of 1901. Circulars were printed in the newspapers and copies widely distributed giving information and advice on the Aedes aegypti and how to combat it. Conferences were held and lectures given to educate the householders on the necessity of screening and oiling their cisterns to eliminate the favorite breeding places of the yellow fever mosquito. In August the City Board undertook an experiment in a selected locality of the city, with the intention of visiting every house within a particular area and of oiling all cisterns in order to destroy mosquitoes while in the process of development. Many householders refused to participate in the program. Others allowed the oiling process the first time around, but refused on the second, insisting that they could taste and smell oil in their drinking water. Hence, what was designed as a demonstration which might be repeated throughout the city failed

completely. Convinced that in the face of apathy and opposition the program could never be effected without special supporting law, the City Health Board attempted to secure an ordinance on the subject, but to no avail.⁴

From time to time between the summer of 1901 and the summer of 1905, the New Orleans Medical and Surgical Journal, the city newspapers, the State Board of Health, and the Orleans Parish Medical Association recommended the screening and oiling of cisterns in a war against the mosquito. Dr. Kohnke of the City Board kept up his agitation throughout the period, but because of ignorance, indifference, or skepticism, New Orleanians failed to arouse themselves to the task. Not a single yellow fever death occurred in the Crescent City in the years 1900 through 1904.⁵ While the disease was not present, few could bother to become disturbed about an unseen enemy. The challenge was not met until it occurred in the form of a yellow fever epidemic; then and only then were the health authorities

⁴Sir Rubert William Boyce, Yellow Fever Prophylaxis in New Orleans, 1905 (London [1906]), 8, 16; Report of the Louisiana State Board of Health for 1900-1901, 46-51; Picayune, August 30, 1901.

⁵Report of the Louisiana State Board of Health for 1900-1901, 7; Boyce, Yellow Fever Prophylaxis, 1.

able to arouse people to action. In spite of certain obstructions initially posed by the Italian segment of the population, the crusade against the yellow fever mosquito in the midst of the 1905 epidemic reflected a remarkable display of energy and enthusiasm by the people of New Orleans. The crusade was preached from pulpit and press, at indoor and outdoor educational mass meetings, and in several different languages. It was encouraged by official and unofficial circulars containing advice and information and given legal sanction by city ordinances. The State and City Boards of Health, the United States Public Health and Marine Hospital Service, the Orleans Parish Medical Society, citizens ward volunteer groups, women's organizations, and Negro leagues all cooperated in the fight against yellow fever. Armed with the knowledge of the mosquito as transmitter, the crusaders were able to employ effective weapons against the disease; the final conquest was at hand.

In 1905 the New Orleans population numbered about 375,000, with less than a fourth immune to yellow fever by previous attack. In the preceding four or five years, numerous Italian immigrants had swelled the population, settling in the old portion of the city near the water front.

It was later believed that yellow fever had slipped past the quarantine station sometime late in May by means of an infected passenger or an infected mosquito, probably from Central America. The fever spread first among the Italians, who were clannish, unfamiliar with both yellow fever and the English language, and reluctant to call in medical aid. Hence, the disease gained a foothold in that portion of the city, and not until July 13 were the first suspicious cases brought to the attention of the health authorities. Meanwhile, many Italians from the infected area had moved to other sections of the city and the state, carrying the fever with them and thus facilitating its spread. By July 21, when the first public announcement came from the authorities, it was estimated that at least a hundred cases and twenty deaths had already occurred.⁶

Organization of the anti-fever campaign started almost immediately after the discovery of the disease in New Orleans. Even before the public announcement, Dr. Kohnke had begun the work of fumigation in the infected

⁶Rudolph Matas, "A Yellow Fever Retrospect and Prospect," Louisiana Historical Quarterly, VIII (July, 1925), 462-63; Picayune, July 31, October 15, 1905.

area. On July 21 the State and City Boards of Health, representatives of the United States Public Health and Marine Hospital Service, health officials from neighboring states, and members of the Orleans Parish Medical Society met in conference to discuss the problem at hand. The next day, July 22, the medical society created a special committee to work with the health authorities. On the same day several prominent citizens, the Mayor, and the chairmen of the State and City Boards of Health conferred, made plans for halting the spread of infection, and organized a Finance Committee to collect funds for the campaign. On July 23 the newspapers published an address to the citizens of New Orleans signed by Dr. Kohnke of the City Health Board and Dr. J. H. White of the United States Public Health and Marine Hospital Service, and approved by the special committee of the Orleans Parish Medical Society. The message proclaimed the existence of an emergency "which demands the attention of every individual, with the view to limiting and preventing the spread of epidemic disease." The statement declared the mosquito as the only means of yellow fever's transmission and recommended to the citizens the following measures: screening and oiling cisterns and cesspools or privies, emptying all receptacles of stagnant

water, sleeping under mosquito nets, and screening doors and windows.⁷

On Sunday, July 23, the Reverend Dr. Beverley Warner, rector of Trinity Church, spoke out for the crusade from his pulpit. In the following weeks other clergymen of all denominations would follow his example. On Monday, July 24, the Fourteenth Ward of the city organized to clean all streets, yards, and gutters in the area, and to have every cistern screened. More than a hundred citizens attended the organizational meeting and made liberal financial contributions to institute the program. They divided into committees and planned to begin work on the following day. To facilitate the work they advertised for bids to screen some 250 cisterns. Within a day or two other wards followed their example, and by July 26 the health authorities decided to establish a central headquarters for the ward groups with Dr. Beverley Warner as chairman. His task was to coordinate the ward activities, report to the city board, and thereby eliminate duplication

⁷Boyce, Yellow Fever Prophylaxis, 18, 20; Picayune, July 23, 1905.

of work.⁸

On Wednesday, July 26, campaign procedure was being developed all over the city. In addition to appointing Dr. Warner superintendent of ward work, the City Board planned its own activities. It established a sanitary force of a hundred men to locate fever cases, fumigate and screen infected premises, and deal with each new focus of disease as it developed. Another force of 250 men was assigned to work in the field, and house-by-house, ward-by ward, to make war on the mosquito. The officers of all the Italian societies in New Orleans assembled that day to discuss the yellow fever problem. They appointed special committees to make house-to-house visits among the Italians, urging them to report all cases of disease and to comply with official measures.⁹ A yellow fever isolation hospital established by the city health authorities in the infected district opened on July 26 and received its first patients. Under the supervision of Dr. Hamilton Jones, who had also directed the yellow fever hospital in 1897, every precaution

⁸Boyce, Yellow Fever Prophylaxis, 18, 20, 27, 28; Picayune, July 25, 27, 1905.

⁹Boyce, Yellow Fever Prophylaxis, 20, 27; Picayune, July 27, 1905.

was taken to keep mosquitoes away from the patients.¹⁰

Within less than a week after the first public announcement of yellow fever's existence in the city, systematic measures had been taken by the health authorities, the medical society, and the citizens of New Orleans to create the working machinery necessary for an all-out war of extermination against the disease-bearing Aedes aegypti. The machinery of organization would fail in its mission, however, unless supported by public understanding and enthusiastic cooperation. To stimulate the New Orleans populace, an educational campaign was a vital necessity, and in waging that campaign, all the forces of organization came to the fore. Contributing its full support to the educational drive, the New Orleans press published notices and circulars, described the activities of the health authorities and ward committees, and provided editorial propaganda for the cause. The Picayune editor assured the people of New Orleans that yellow fever could be transmitted only by the mosquito and that it was easily prevented "by the adoption of the strictest safeguards against the

¹⁰Augustin, History of Yellow Fever, 885; Boyce, Yellow Fever Prophylaxis, 19.

pestiferous insect." Day after day New Orleanians were urged to oil and screen cisterns and to sleep under mosquito nets. Recognizing that the yellow pestilence no longer was "the vague terror, borne on the hot winds in waves or disseminated in unknown and mysterious fashion," the editor of the New Orleans Times-Democrat urged the citizenry to keep up the good fight against the scourge.¹¹

Throughout the epidemic the Orleans Parish Medical Society rendered a valuable service in sending out notices, circulars, and pamphlets. The members of the Society tried to impress upon all physicians the absolute necessity of reporting immediately all cases of fever, even doubtful ones. Further, they worked hand in hand with the health officials in the educational campaign, and were among the first to advocate the transfer of the yellow fever crusade from the direction of local authorities to the United States Public Health and Marine Hospital Service. When the federal authorities took charge of the campaign, the medical society continued to cooperate in the fight against yellow fever. Pamphlets containing instructions

¹¹Picayune, July 23, 1905; Times-Democrat, August 28, 1905; Boyce, Yellow Fever Prophylaxis, 52-53.

and advice to physicians and nurses were prepared by Dr. Rudolph Matas, renowned physician and surgeon of New Orleans. These pamphlets were distributed by the medical society and paid for by the United States Treasury Department. To propagandize the anti-mosquito crusade, physicians lectured in churches, in factories, and in school rooms throughout the Crescent City, and in other parts of the state as well.¹² Almost every night during the epidemic someone lectured somewhere in New Orleans on the subject of the yellow fever mosquito. Dr. Kohnke was tireless in his efforts to convince the people of New Orleans that all activities should be directed against that one species of mosquito. Night after night he lectured, describing the life cycle of the mosquito with the aid of lantern slides, recommending the use of oil on cistern water to kill the "wiggle-tails" already there and to hinder mosquitoes from laying more eggs on the water. He assured the people that oil could not hurt their drinking water. Further, he recommended sulphur fumigation of all houses.¹³ Thousands of

¹²Augustin, History of Yellow Fever, 1066-77; Boyce, Yellow Fever Prophylaxis, 21-27.

¹³Picayune, July 25, 27, 1905; Boyce, Yellow Fever Prophylaxis, 28, 59.

people heard the lectures of Dr. Kohnke and other speakers and thereby were converted and enrolled in the campaign.

The Citizens Ward Committees, centralized under Dr. Warner of Trinity Church, sent in daily reports of work accomplished: houses inspected and fumigated, cisterns oiled and screened. With Dr. Warner acting as coordinator, the city health authorities could then check the wards to see what else had to be done. The Ward Organizations also participated in the education campaign. They issued notices, set up posters in prominent places, and sponsored educational mass meetings to inform people that extinction of mosquitoes meant freedom from yellow fever in the future.¹⁴

In addition to supervising the ward work, Dr. Warner also participated actively in the educational campaign. In a circular letter he made a special appeal to the clergy of all religious denominations to preach the anti-mosquito crusade.¹⁵ Dr. Warner and Dr. Kohnke addressed groups of New Orleanians almost every night during the epidemic, and

¹⁴Boyce, Yellow Fever Prophylaxis, 28; Picayune, July 28, 29, August 4, 1905.

¹⁵Picayune, July 31, 1905.

both were instrumental in organizing the Negroes of New Orleans to aid in the great war on yellow fever. In late July Dr. Warner addressed the first gathering of Negroes and explained that yellow fever was no longer the "bugbear it had been in former years." He mentioned the old belief that Negroes possessed immunity to the disease, but expressed his opinion that if an infected mosquito stung a Negro, it would be "just the same as though a white man had been stung." The prominent Negro men present at that first meeting, including doctors, lawyers, and ministers, organized the Central Sanitary Association and made plans to establish branches among the Negroes in the various wards of the city.¹⁶

On August 16 Dr. Warner and several other speakers addressed a mass meeting of Negroes at the Second Baptist Church. Regarding the possibility of racial immunity, one Negro speaker declared: "Suppose we were immune, all persons are not, and we must help them. We are a part of the community, and our prosperity depends upon their prosperity." Furthermore, he added, "When the white people get stirred up like this there is sure something doing. They don't

¹⁶Ibid., July 29, 1905.

raise a big fuss like this over nothing. Let's help them kill this stegomyia [Aedes aegypti]."¹⁷ Another large assembly of Negroes met in the First Street A.M.E. Church on the night of August 22 to hear short lectures by a member of the Woman's League, several Negro ministers, and Dr. Kohnke. A considerable number of Woman's League members attended that meeting, and many other white persons were scattered about in the audience. Dr. Kohnke encouraged the Negroes to organize and assist in the crusade. "There is no difference between white and black," he said. "We live the same way, we get sick the same way, we get well the same way, we die the same way." Emphasizing the equality theme, he continued, "There is no distinction of color with the stegomyia mosquito. He is just as ready to bite you as he is to bite me." If the mosquito happened to be an infected one, a Negro would take yellow fever just as a white man. Hence, it was necessary for them to follow the same precautionary measures as the whites. Dr. Kohnke then gave his usual lecture on the life cycle of the mosquito with stereopticon illustrations. When the

¹⁷Ibid., August 17, 1905. Stegomyia was the term previously applied to the Aedes aegypti mosquito.

Negro minister dismissed the meeting, he urged all persons to go forth and fumigate their houses and oil and screen their cisterns.¹⁸

Interestingly enough, although susceptible to yellow fever, Negroes did exhibit a striking tendency toward recovery. Although, as Dr. Kohnke stated, the stegomyia did not recognize the color line, obviously the people of New Orleans did, for the Negroes were not invited to join the ward organizations, but were encouraged to form "separate but equal" associations instead. Nevertheless, some of the initial educational sessions among the Negroes were integrated, at least to some degree.

In the campaign another segment of the New Orleans population, the women, worked actively with the health authorities and with the regular ward organizations although set apart in their own separate organizations. Especially active was the Home and Education Department of the Woman's League under the chairmanship of Mrs. W. J. Behan. That group participated wholeheartedly in the work of sponsoring popular lectures in public meeting places throughout the city. They had started something of an anti-mosquito

¹⁸Ibid., August 23, 1905.

campaign even before the outbreak of the epidemic of 1905, but like Dr. Kohnke, apparently had met with little success. These civic-minded women not only organized and sponsored lectures but also established Ward Clubs and undertook a house-to-house campaign, urging householders to oil and screen their cisterns and to fumigate their houses. Another "progressive" women's organization, the Ladies of the Era Club, worked diligently throughout the campaign. The members visited homes and informed housewives of the yellow fever mosquito and measures to eliminate it. Under the leadership of these women's groups and perhaps others, women in the different wards of the city formed associations to cooperate with the other volunteer forces.¹⁹

One thing more should be noted in connection with the women's activities in the crusade, which reflects the early twentieth-century striving for female equality. In mid-September the New Orleans Health Association was organized to work for the benefit of the city's future health, to bring about changes in sanitary legislation along the lines of recent scientific discoveries, and to work for the enforcement of those laws. When Dr. Warner suggested

¹⁹Boyce, Yellow Fever Prophylaxis, 59; Picayune, August 3, September 3, 1905.

to the members of the Woman's League that they form a "women's auxiliary" to the Health Association, they declined. They agreed to cooperate with the new organization while continuing their own work, but if they could not be accepted as members of equal standing in the society, they refused to have any second-class connection with it.²⁰ In 1905, then, not only Negroes but also women found themselves relegated to segregated organizations, cooperating with, but not a part of, the central corps of white men.

In mid-August a new feature was introduced at one of the educational mass meetings sponsored by the Woman's League: Dr. Felix Formento agreed to deliver a speech in Italian. Many persons of that nationality attended the lecture and seemed willing to accept Dr. Formento's advice. He explained to them the relationship of the mosquito to the disease and described the work of the United States Public Health and Marine Hospital Service, which had taken over the campaign early in August. Furthermore, he told them why they could not be allowed to "throw obstacles in the way of the public health and safety" and requested

²⁰Picayune, September 16, October 6, 1905.

that they cooperate with the health authorities.²¹ The speeches of Dr. Formento and others in the Italian language, the influence of the prominent Italian citizens of the community working through their associations, and the influence of the Catholic clergy finally won the confidence and the cooperation of many previously obstructionist Italians.

As the educational campaign began to win converts and the ward workers and city authorities went into action, the Citizens' Finance Committee ordered 25,000 lapel buttons bearing the words "My Cisterns are all right; How are Yours?" around an image of the Aedes aegypti. For the purpose of further propagandizing the movement, these badges were to be worn by persons who had already attended to the screening and oiling of their cisterns.²² Reflecting a clever imagination, a unique advertisement appeared in the Picayune shortly after the cistern-screening movement was initiated: "STEGOMYIA WIRE, in all size rolls, is one of our specialties. If you don't know what a Stegomyia is, ask Dr. Kohnke."²³

²¹Ibid., August 15, 1905.

²²Ibid., July 28, 1905.

²³Ibid., July 25, 1905.

Promoted by many diverse groups in the city with Dr. Kohnke, Dr. Warner, and the Woman's League in the vanguard, the city-wide educational campaign was carried into the factories and the school rooms. In early September Dr. Warner made arrangements with about half the factories in the city for thirty-minute sessions with the employees. Physicians and laymen volunteered to handle the discussions and undoubtedly influenced thousands of persons in these forums who had not been reached otherwise.²⁴ During one week in October, Dr. Warner and various New Orleans physicians visited some fifty-one schools and talked to 43,000 children, distributing among them printed instructions for fumigation and other measures against the yellow fever mosquito in the hope that the children would do "their missionary work at home."²⁵

At various times during the epidemic, certain dates were designated as General Fumigation Days when all citizens were urged to fumigate their homes by burning sulphur. The ward organizations provided the sulphur free of charge to those unable to purchase their own. The

²⁴Ibid., September 3, 1905.

²⁵Ibid., October 5, 15, 1905.

Citizens Volunteer Groups culminated their work on October 14 and 15 with one day of general cleaning to clear away all bottles and cans where mosquitoes might breed and one day of general fumigation to clear the houses of the pests.²⁶

In spite of the general enthusiasm and cooperation among the citizens of New Orleans, it was still too much to expect unanimity of purpose in a city of that size. Some persons simply would not screen their cisterns voluntarily or follow other recommendations made by the health authorities unless absolutely forced to do so. Hence, it soon became clear that an anti-mosquito ordinance was absolutely vital to provide legal support for the crusade. An ordinance was introduced in the City Council on July 25 which authorized the Board of Health to treat water with oil when the receptacles had not been properly screened. Further, it required that cisterns, tanks, barrels, or other water containers be screened or otherwise covered in a manner satisfactory to the Board of Health. For any single violation, the ordinance provided a fine up to \$25

²⁶Ibid., August 17, 21, 25, September 30, October 5, 1905.

or imprisonment up to thirty days, or both. The failure to comply with any provision of the ordinance was considered a separate violation for each day of noncompliance after notification by the health authorities. The measure passed the Council unanimously on August 1 and with the Mayor's signature became law on August 2. The property owner or agent bore the responsibility for oiling and screening cisterns. Cheese cloth could be used as a temporary cover until October 1, by which time it had to be replaced with a certain kind of screen wire. Several thousand copies of the ordinance were printed and distributed throughout the city, and every property owner was ordered to comply with the ordinance within forty-eight hours after its announcement or suffer the penalty. It was left to the Board of Health to decide if the cistern also needed oiling after its screening. By mid-August a number of persons had been fined and jailed for refusing to screen their cisterns, evidencing the serious intent of the city authorities to enforce the measure. In September the Orleans Parish Medical Society urged that the October 1 deadline for permanent screening be postponed until a later date because of the danger of releasing mosquitoes imprisoned within the cisterns. Accepting the

society's advice, the City Council passed a new ordinance on September 26 to become effective on January 1. Present screens were to be retained; if wire screens were installed, they had to be placed over the cheesecloth without removing it.²⁷

In early August an important change was effected in the administration of the anti-fever campaign: the transfer of command from the local authorities to a federal force. In a conference held on August 4, the mayor, the President of the Orleans Parish Medical Society, representatives of the City and State Health Boards, and representatives of New Orleans commercial bodies decided to request that the United States government take over the yellow fever campaign in the Crescent City. Accordingly, Governor Newton C. Blanchard sent a message to President Theodore Roosevelt requesting that the federal government assume control of the situation in New Orleans. At the same time Mayor Martin Behrman wired the President declaring the general desire of New Orleans that federal authorities take over the task of eradicating yellow fever.

²⁷Boyce, Yellow Fever Prophylaxis, 27; Picayune, July 26, August 2, 3, 18, September 22, 27, 1905.

Noting the success of the federal health officers in combating yellow fever in Havana and elsewhere, the mayor appealed for "executive interposition in behalf of the people of New Orleans." President Roosevelt immediately directed the Surgeon-General of the United States to attack the problem in the Crescent City. In a public announcement, Dr. Quitman Kohnke informed the citizenry that the transfer of command to the federal government was no indication that the epidemic had become more serious, nor that the local authorities were unable to handle the situation. "Outside communities will have greater confidence in the United States Public Health authorities," he said, "than they appear to have in the local State officers." It was hoped that quarantines might ease up with New Orleans under federal health supervision. No radical administrative changes occurred; essentially the same men continued to carry on the work.²⁸

From the onset of the epidemic, Dr. J. H. White of the United States Public Health and Marine Hospital Service had worked with the local authorities. On August 7

²⁸Picayune, August 5, 1905; Boyce, Yellow Fever Prophylaxis, 35.

he took charge of the campaign and proceeded to develop a more systematic and authoritative approach to the work already started by the local officials. Within a few days Dr. White had established a central headquarters, and with a staff of forty surgeons of the federal service he created subdivisional headquarters in each ward. Each ward center had a supply of materials for fumigating, oiling, and screening. House-by-house, block-by-block, gangs of workmen in each ward proceeded each day to inspect, oil, screen, and fumigate. Whenever a case of fever was reported to ward headquarters, a squad of workmen was dispatched immediately to attend to the necessary screening of the patient and fumigation of the house. Sometimes the patient was removed to the emergency yellow fever hospital; afterward, his house and others in the neighborhood were thoroughly fumigated to kill any infected mosquitoes. The new command coordinated the activities of the voluntary ward groups and made a systematic survey of every ward to see where further work was necessary.²⁹

Dr. White went to great pains to convince the

²⁹Augustin, History of Yellow Fever, 882-84; Boyce, Yellow Fever Prophylaxis, 37-44; Picayune, August 8, 1905.

citizenry that it was vitally necessary to obey the rules based on the principle of mosquito transmission. Furthermore, he assured them that house quarantines would not be invoked. In a letter to every doctor in the city, he urged the immediate reporting of all cases, not only positive cases of fever, "but also any case you may be unable, even at your first visit, to say is not yellow fever." Dr. White made every attempt to obtain the complete cooperation of the medical profession "in the checking of the multiplication of new foci of infection, and the early destruction of those already existing."³⁰

The attempt to halt a yellow fever epidemic which had been slowly developing for almost two months before coming to the attention of the authorities was a task of gigantic proportions, even with the knowledge of the insect vector. In a city the size of New Orleans with thousands upon thousands of cisterns, and millions of mosquitoes, such a task was not easy to accomplish. For the campaign to be effective it had to be complete. Since the disease had obtained a head start, it was impossible to stamp it out immediately. Nevertheless by early October

³⁰Augustin, History of Yellow Fever, 886.

the number of new cases developing daily had declined considerably, and on October 9 Dr. White ordered that the official ward forces gradually be cut down. By October 16 out of nearly 1,300 men previously employed in the sub-headquarters, only 400 remained at work, and that number was decreased steadily. The high point of the epidemic had occurred in mid-August after which its force had declined. Still, a few cases continued to occur daily throughout October and early November.³¹ The epidemic of 1905 lasted about as long as epidemics ordinarily did, but its decline came early in the season, and the number of cases definitely was held down to a figure far below what it might have been if no fight had been waged.

The New Orleans Picayune had not been pleased with the transfer of control to the federal authorities, fearing that it would result in "Federal domination." Recalling the old fight against the National Board of Health to preserve the "sovereignty and rights of the State" from "absorption by the Federal Government," the editor remarked: "Now we rush into the arms of Uncle Sam, and are only too

³¹Boyce, Yellow Fever Prophylaxis, 51; Picayune, October 11, 16, 1905.

happy if we can trade our out-of-date Democratic State sovereignty trumpery for relief from the responsibility of a plain duty, and for money enough for a temporary sanitation of the city. Truly times change." Nevertheless, once the change had been effected the editor felt it the duty of the citizens to support the federal authorities "so that the very best result may be obtained, a result that may be worth thousands of valuable lives and countless millions in values."³²

The Yellow Fever Crusade was an expensive venture, but worth every cent expended in terms of benefits obtained at the time and in the future. From the very beginning, a Citizens Yellow Fever Fund Committee was organized with Charles Janvier as chairman to collect money from the citizens of New Orleans and to handle the disbursement of the funds. When the federal forces assumed control, Surgeon-General Walter Wyman insisted that New Orleans supply the labor and materials for the campaign while the government would provide the medical officers, supervision, and inspection services on railroads and in detention camps. The State appropriated \$100,000 for the work; the

³²Picayune, August 5, 23, 1905.

City Council, \$50,000; and the citizens of New Orleans contributed \$160,000. Of the State appropriation, at least \$20,000 went to aid the fight in the infected towns of Louisiana outside of New Orleans. In addition to the expenditure of the local funds, the federal authorities spent approximately \$50,000 for salaries and expenses of the officers, for the maintenance of detention camps, and for inspecting and fumigating railroad freight cars. Additional funds collected by the volunteer ward groups and used for cistern-screening and oiling amounted to \$30,000. Hence, in New Orleans alone, the crusade cost well over \$500,000, not including the expenditures of all those individuals who screened their own cisterns and houses. Thousands of additional dollars were spent in other portions of the state as the campaign was extended to those areas where yellow fever spread. The unused balance of the New Orleans funds, approximately thirty or forth thousand dollars, was set aside as an emergency hospital fund for future use.³³

³³Augustin, History of Yellow Fever, 884-85; Picayune, August 6, 7, 11, October 15, 18, 22, 29, 1905; Boyce, Yellow Fever Prophylaxis, 60-62.

The first announcement of yellow fever in New Orleans had set off the usual chain reaction of interstate and intrastate quarantines. For the first time, a quarantine barrier was erected against New Orleans by Havana, Cuba, a yellow fever center so frequently quarantined in the past by New Orleans and other port cities. The Picayune called the Havana quarantine "one of the revenges of fate," but felt that Havana's success in eradicating yellow fever should give encouragement to New Orleans. One big obstacle to the work was popular skepticism regarding the mosquito as a transmitter of the fever. Pointing to the lesson to be learned from the anti-mosquito campaign in that Cuban center, the Picayune editor said, "let us no longer be old fogies," but attend to the problem immediately.³⁴

In late July as the news of fever in New Orleans spread around the state and to neighboring states, restrictions were established against passengers and baggage from the Crescent City, but through-traffic and freight met with fewer obstructions than in previous years. After a conference with Dr. Edmond Souchon, President of the State

³⁴Picayune, July 24, 1905.

Board of Health, and representatives of the Illinois Central, Texas Pacific, New Orleans and Northeastern, and Southern Pacific Railroads, Dr. White of the United States Marine Hospital Service proceeded to establish detention camps on all railroad lines so that after five days of detention, persons might secure health certificates to pass through quarantine lines.³⁵

On July 28 the Louisiana State Board of Health proclaimed quarantine for the entire state against unauthorized passengers from New Orleans and other infected localities. Further, the Board forbade all railroad and transportation companies to sell tickets to any point in Louisiana from New Orleans or other infected points, under penalty of law.³⁶ Only those persons from detention camps who had received health certificates from the federal health authorities were permitted to travel from infected areas. Some parishes, although protected by the State Board regulations, continued to create even more stringent blockades. In early August when St. Landry Parish tried to exclude freight from New Orleans, Dr. Souchon, President of the

³⁵New York Times, July 28, 1905; Picayune, July 23, 24, 1905.

³⁶Picayune, July 29, 1905.

State Board, reminded the parish board of the Act of 1898. That act gave the State Board power of supervision over all local quarantine regulations and provided that no local board of health could establish a rule in conflict with those set forth by the State Board. Dr. Souchon declared that the St. Landry Parish health board had acted illegally in quarantining freight cars which had been fumigated and inspected by the United States Public Health and Marine Hospital Service since the State Board considered such freight not liable to quarantine. Still many local boards tried to halt the passage of trains through their territory and otherwise interfered with the transportation of mail, freight, and passengers approved by the State Board and United States health officers. Such violations of the Act of 1898 led the State Board to issue a proclamation declaring that those persons who continued to ignore State Board regulations might be liable to civil action for interference with interstate commerce. Furthermore, the Board firmly expressed the intention "to reform by persuasion, if possible, but forcibly if necessary, the present chaotic condition of quarantine matters in Louisiana." If the local boards continued to pose unreasonable, as well as illegal restraints to commerce, the Board

threatened to ask the Governor to call out the state militia to remedy the situation.³⁷

The United States Post Office Department took action against the quarantines by abolishing the post office in Vinton, Louisiana (Calcasieu Parish) when that town refused to accept mail. All mail directed to Vinton was to be returned to the sender or sent to the dead letter office. The post office authorities stated that Vinton would not enjoy the benefits of a post office for many weeks, perhaps even months, and threatened similar action against any town refusing to accept the United States mail.³⁸ Obviously many persons outside New Orleans were hard to convince that yellow fever could be carried only by the mosquito and not by parcels, letters, or other fomites.

One of the most intense conflicts in relation to the quarantine problem arose between the sovereign state of Louisiana and the sovereign state of Mississippi, a conflict in which the two states reached a point just short

³⁷Louisiana State Board of Health, The Sanitary Code, 1899 (New Orleans, 1899), 8; Picayune, August 6, 9, 1905.

³⁸Picayune, August 10, 1905.

of war. On July 26 Governor James K. Vardaman of Mississippi accused the health authorities of Louisiana of having attempted to conceal the existence of yellow fever from neighboring states. Governor Newton C. Blanchard of Louisiana vehemently denied the charge. Several statements regarding the charge of evasion and concealment passed back and forth between the two governors, while tempers gradually reached the boiling point. On August 2 a New Orleans newspaper ran this headline: "Vardaman Mosquito Fleet Invades Louisiana Waters." It seems that one of the Mississippi quarantine boats, patrolling the coast, had entered Lake Borgne. It not only interfered with Louisiana fishing boats in that body of water, but also tried to stop boats from entering Lake Borgne from Lake Pontchartrain and from the Lake Borgne Canal. According to the newspaper account, the Mississippi quarantine schooner had entered the lake in Louisiana territory and had "proceeded to act as if the Louisiana lake were a Mississippi puddle in the backyard of Governor Vardaman." Furthermore, it was reported that armed quarantine guards from Mississippi had crossed Pearl River into Louisiana territory and had taken their positions on the Louisiana shore. This "armed invasion" of Louisiana provoked an

immediate protest to Vardaman from Governor Blanchard. In addition, the Louisiana Governor ordered the Louisiana Naval Brigade to arm a fleet of patrol boats and proceed to Lake Borgne to deal with the invaders. On August 3 Vardaman wired an ambiguous reply to Blanchard's protests, stating that he had ordered the Mississippi boats to stay out of Louisiana waters and the guards to refrain from entering Louisiana territory; but, he said, "I am going to also see to it that the people of Louisiana are not permitted to violate the quarantine regulations of Mississippi." Upon investigation, it was discovered that the Mississippi boats still patrolled Lake Borgne. At this point Governor Blanchard ordered the Louisiana Naval Brigade to take action to protect Louisiana interests in Lake Borgne, the Rigolets, and Pearl River. The sheriffs and district attorneys of Orleans and St. Bernard parishes were directed to accompany the Louisiana fleet and to seize those armed vessels illegally patrolling Louisiana waters, arrest the crewmen, and bring them before the grand jury of the appropriate parish. Justifying his course of action, Governor Blanchard stated: "It is not my intention to invade the waters of Mississippi or take an aggressive course against the citizens of that State.

But it is my intention to employ all the means at my command to protect the interests of the fishermen, oystermen and boatmen of Louisiana." He felt that the rights of Louisianians had been threatened by an unwarranted invasion, and "if those who were guilty of this interference put themselves in the way of the civil and military authorities of this State they must accept the consequences." Reading the newspapers, one might think that Louisiana and Mississippi were actually at war. The Rigolets was termed "the base of operations" in a bombastic description of an "encounter between the war vessels of the States of Louisiana and Mississippi." Reduced to its simplest terms, the "encounter" went something like this: the Mississippi boat approached the Louisiana boat and demanded its credentials and destination; when it was found to be a boat of the Louisiana Naval Brigade, the Mississippi vessel fled the scene. The highlight of the farcical war was the capture of one Mississippi quarantine vessel by the Louisiana Naval Brigade and the jailing of its crew in St. Bernard Parish. By August 6 the "War of the Waters" was over. When the United States Public Health and Marine Hospital Service took charge of the coastal area, the conflict between the

two states subsided.³⁹

Modified quarantine regulations continued to prevail in neighboring states and uninfected areas in Louisiana until the latter part of October. On October 21 the Louisiana State Board of Health removed the restrictions on travel from New Orleans and other infected towns in the state. The Board resolved that local health authorities might continue quarantines against persons, but prohibited them from interfering with the passage of trains and boats and from excluding freight shipments.⁴⁰ Early in November as the fever died out completely in New Orleans and elsewhere and as cold weather arrived, even the most cautious could no longer justify their quarantine regulations. The last barrier in the state fell on November 10 when Lafourche Parish removed its embargo against infected points inside and outside the parish.⁴¹

According to the report of the State Board of Health, the fever of 1905 had spread in Louisiana to

³⁹Ibid., July 29, August 2, 3, 4, 5, 6, 1905.

⁴⁰Ibid., October 22, 1905.

⁴¹Thibodaux Lafourche Comet, November 16, 1905.

twenty-eight parishes,⁴² resulting in a total of 9,321 cases and 988 deaths within the state. In Orleans Parish alone 3,402 cases had occurred, of which 452 died. In some manner which the Board was unable to determine, the fever had entered the state and established itself in a number of widely dispersed foci before the health authorities became aware of its existence.⁴³ Italian immigrants played a significant role in concealing the early cases from the health officials, thus allowing the disease to gain a foothold in New Orleans. Likewise, they contributed to the spread of the pestilence throughout the state by moving from the original focus of infection to Italian settlements in various communities throughout Louisiana. Crowded together in the slum areas of the Crescent City, especially in the neighborhood of the French Market, the Italians suffered the first cases of fever as it erupted in the city. They tended to avoid contact with local physicians and medical authorities, and for six or eight weeks

⁴²See Chart, "Yellow Fever in Louisiana, 1905," at the end of this chapter.

⁴³Report of the Louisiana State Board of Health for 1904-1905, 7, 45, 48.

yellow fever developed without hindrance.⁴⁴

Even after the epidemic came to light and the anti-fever campaign got under way, the Italians continued to pose obstructions to the health authorities by concealing cases and refusing to comply with official regulations. One New Orleans physician blamed "Italian ignorance" for the "supposed high death rate" in the epidemic. Many of the fever cases had received no medical treatment at all, he said. Unaware of the dangers of heavy foods, some patients continued to eat "bananas and macaroni until in the last stages when a physician is notified, or the department gets word of it." The Picayune reported that mosquito nets had been distributed among the Italians in the infected districts, but noted that the authorities found it almost impossible to persuade them to sleep under the nets or even to keep one over a patient.⁴⁵ Under the circumstances it is not surprising that the disease continued to run its course in spite of the great crusade.

In a conference of New Orleans commercial interests, one argument set forth in favor of transferring control to

⁴⁴Boyce, Yellow Fever Prophylaxis, 3-5.

⁴⁵Picayune, August 3, 1905.

the federal government involved the difficulties encountered by local officials in dealing with Italians. The Picayune summarized the problem in a statement reflecting a considerable amount of prejudice, as well as an impatience that is readily understandable:

They [the Italians] do not speak the English language in the first place. It is impossible to reason with them. They are not submissive to modern medical treatment. When attacked with the fever they have been obstreperous, refractory and uncontrollable in many instances. When mosquito bars are placed over them they refuse to allow them to remain, tearing and cutting the bars down. When convalescent, Italian patients again and again have eaten freely of macaroni, bananas, etc., which has resulted in death almost immediately. They have slipped through quarantine lines and spread disease in spite of every effort to check the infection.⁴⁶

By mid-August through the educational campaign and the efforts of clergymen and prominent Italian leaders of organizations, the people of that nationality in the Crescent City gradually became more cooperative and "amenable to reason," but some still exhibited a tendency to conceal fever cases from the authorities.⁴⁷

In Patterson, Louisiana, where the fever raged severely, the Italians again provided serious trouble for

⁴⁶Ibid., August 5, 1905.

⁴⁷Ibid., August 14, 1905.

the health officials. The physician in charge reported to Dr. Souchon of the State Board that the Italians in Patterson were threatening riot and that he expected an attempt to burn the yellow fever hospital. Several Italians had died of the fever and their compatriots believed the doctors responsible. The Governor of Louisiana dispatched arms and ammunition to the frightened community so that the citizens might protect themselves and the hospital. On the night of September 2 a large number of citizens assembled at the hospital and organized to patrol the town. They also planned to invite the Italians to a meeting to hear speeches by "prominent Italio-American citizens," the Italian Consular agent, a Catholic priest, and others able to speak the Italian language. Meanwhile, armed citizens patrolled the streets at night and guarded the hospital, and all nurses and doctors were armed in case of an assault on the hospital. The planned assembly of Italian people was prevented by rain, but some of the leading Italian citizens and the priest met on September 3 and planned to talk with every Italian in the town and try to win their cooperation.⁴⁸

⁴⁸Ibid., September 3, 4, 1905.

The educational campaign paid off; within a short time the situation had calmed down and many of the Italians agreed to allow the fumigation of premises and the transfer of patients to the hospital. Through the combined efforts of the health officials, Catholic priests, and a few Italian leaders, the situation was explained to the panic-stricken people and their fear and distrust of the officials partially removed. The Very Reverend Abbot Paul Schaeuble, O.S.B., who spent several weeks in Patterson during the epidemic and worked diligently to alleviate the existing frictions, displayed a great deal of patience, sympathy, and understanding in dealing with the problem. "The Italians are good people," he declared, "but the trouble lay in their simplicity and ignorance and in their inability to speak the English language." With the coming of the fever to Patterson, they had succumbed to sheer terror. "They mistrusted everything that was being done to help them," Father Schaeuble explained, "and believed that the medicines prescribed were poisons for the purpose of ridding the locality of the sick people."⁴⁹ Nevertheless, opposition to screening and fumigation

⁴⁹Ibid., September 12, 1905.

together with the failure to report all cases kept the fever going in Patterson throughout October. After investigating the situation there, a federal health officer called it the "worst fever-ridden town in the State" and reported that in the absence of full cooperation on the part of the residents, the disease undoubtedly would continue until the arrival of cold weather stamped it out.⁵⁰

The State Board of Health and officers of the United States Public Health and Marine Hospital Service provided some assistance to local authorities in parishes throughout the state for their anti-fever campaigns. Some communities began educational campaigns and anti-mosquito crusades before yellow fever approached them, while others failed to meet the challenge even with the fever in their midst. Shreveport belonged to the more active category. The city instituted rigid quarantine measures, careful inspection of trains, fumigation of mail and freight, and detention of all passengers without proper health certificates. Inaugurated by a citizens educational campaign, a city-wide anti-mosquito crusade was made compulsory by ordinances requiring the screening of cisterns and

⁵⁰Ibid., October 14, 1905.

fumigation of houses. Several fever cases occurred at the detention camp outside of Shreveport, but the city itself escaped the disease.⁵¹

Outside of Orleans, the parishes hardest-hit by the pestilence in terms of cases and mortality were Lafourche, Jefferson, and East Carroll, with the twenty-four other parishes visited by the fever suffering to a lesser degree.⁵² Praising the country doctors who fought the fever in 1905, the editor of the New Orleans Medical and Surgical Journal observed: "It was a different condition in the country, with infrequent trains and without necessary drugs or sulphur, or with scanty resources or supplies and lacking trained assistants." Sometimes one doctor alone carried the burden in a large area. Such a condition was quite different, said the editor, from that in New Orleans, "where the fight was made with the aid of the United States Government and almost unlimited money."⁵³

In the last days of the epidemic as the fever was

⁵¹Shreveport Journal, July 22, 27, August 1, 2, 15, 26, 29, September 1, October 30, 1905; Picayune, October 15, 1905.

⁵²Picayune, October 15, 1905.

⁵³N. O. Med. & Surg. Jour., LVIII (March, 1906), 751.

rapidly fading in New Orleans, President Theodore Roosevelt made a dramatic appearance in the Crescent City in defiance of advice and warnings from many quarters. Touring the South in the last two weeks of October, he arranged his itinerary so that New Orleans would be the last stop and he could return to Washington by boat to avoid any quarantine difficulties. New Orleanians presented him with an enthusiastic welcome, complete with parade, speech-making, banquet, and all the trimmings. The President responded to Mayor Behrman's public welcoming speech with a laudatory message to the people of New Orleans for their heroic fight against the pestilence, "and he declared with emotion that at any moment, if he had been asked to do so, he would have come in person to assist in this fight that was being so gallantly made."⁵⁴ What a battle that might have been: T.R. in combat with the Saffron Scourge, the Aedes aegypti, and the Italians in New Orleans!

The campaign waged against the New Orleans yellow fever epidemic of 1905 stood forth as a shining example of what might be accomplished by the application of energy and scientific knowledge, and as such deserved the high

⁵⁴Picayune, October 3, 27, 1905.

praise it received. Sir Rubert Boyce of the Liverpool School of Tropical Medicine, who had observed the crusade in person declared: ". . . the measures which the people of New Orleans took to stamp out the epidemic . . . constitute . . . the most brilliant demonstration upon a most extensive scale of the application of modern sanitary teaching to the arrest and prevention of Yellow Fever." He felt that the people of New Orleans had set a precedent to be followed by every area within the yellow fever zone so that the dreaded pestilence might be entirely eradicated.⁵⁵ George Augustin, the yellow fever historian, who was also on hand at the time, wrote: "The epidemic of 1905 is memorable in many ways, but what has stamped it indelibly in the minds of the great thinking public of the entire civilized world, is the grand victory which science, with the modern weapon intelligently wielded, has achieved against a disease which is foreign to this country, and which," he added, "we sincerely hope, has been forever ostracised from our shores."⁵⁶

The experience of the epidemic of 1905 settled once

⁵⁵Boyce, Yellow Fever Prophylaxis, 6.

⁵⁶Augustin, History of Yellow Fever, 881.

and for all the widespread doubts about the role of the Aedes aegypti and transformed the mosquito theory into the mosquito doctrine. The 1905 Report of the Board of Administrators of Charity Hospital stated that the experience with yellow fever patients in Charity had "confirmed in every respect, the soundness of the dogma of the mosquito being the sole transitory agent in propagating yellow fever." In handling about a hundred cases of yellow fever during the epidemic, the Charity Hospital authorities had taken great care to use mosquito bars and to screen the fever wards. Not one case developed among the other patients, physicians, nurses, students, or Sisters of Charity.⁵⁷

Regardless of the experience of 1905 and the positive validation of mosquito transmission, at least one prominent New Orleans physician continued to oppose what he called "The Mosquito Craze." Dr. Charles Faget the younger wrote a lengthy article for the New Orleans Medical and Surgical Journal in October of 1906, expressing his skepticism regarding the mosquito theory and upholding the nineteenth-century view of the fever's transmission by

⁵⁷Report of the Board of Administrators of the Charity Hospital to the General Assembly of the State of Louisiana for 1905 (Baton Rouge, 1906), 39.

fomites. He recommended that articles of clothing and merchandise still be watched very carefully and disinfected as in previous years. Although admitting the possibility of mosquito transmission, he considered it the exceptional or the experimental case and not the normal avenue of transmission. Dr. Faget knew of many cases which he could not account for by the mosquito and of other cases where mosquitoes had been present but the fever failed to spread. Furthermore, he considered the compulsory screening procedure, the fumigations **and** refumigations to kill mosquitoes, and the hasty removal of patients to crowded hospitals not only annoying but actually dangerous to the lives of patients. "Such practices," he declared, "remind one of the bear who, wishing to deliver his sleeping master of an obnoxious 'mosquito,' crushed his head with a huge rock."⁵⁸ Fortunately, Dr. Faget's views represented the exception and not the rule.

In 1906 Dr. C. H. Irion, new President of the Louisiana State Board of Health, provided for over one hundred educational institutes in the areas infected by yellow fever in 1905. At these sessions the mosquito doctrine was

⁵⁸N. O. Med. & Surg. Jour., LIX (October, 1906), 253-73.

set forth in a series of illustrated lectures in English, French, German, and Italian. The anti-mosquito campaign initiated by the lectures resulted in the widespread fumigation of houses and the passage of compulsory screening ordinances in many towns of Louisiana.⁵⁹

The yellow fever campaign of 1905 indirectly produced a number of significant results. According to Dr. Rudolph Matas, the victorious crusade brought a renewed confidence in the future of the Crescent City and the entire American Gulf coast by demonstrating the means of eradicating the pestilence. "It put a new spirit and a new faith in a once apathetic plague stricken, discouraged population," he said. Furthermore, the episode shocked the community into an awareness of the obsolete methods of sanitation, or rather "insanitation," which, Dr. Matas maintained, "had long ceased to be fit even for a colonial regime." The experience of 1905 persuaded many that cisterns, open gutters, unpaved streets, and other "perpetual culture media" for mosquitoes had to go. The situation clearly called for immediate attention to a system of water supply, drainage, sewerage, and street paving that

⁵⁹Augustin, History of Yellow Fever, 1188.

the city needed for the "hygienic existence and security of its population."⁶⁰

Under the impetus of the yellow fever outbreaks in the late 1890's, arrangements had been made for the installation in New Orleans of city-owned systems of drainage, sewerage, and water-supply. The drainage system was in partial operation by 1900, but active work on the sewerage system did not begin until 1903, nor on the water system until 1905. The epidemic of 1905 provided the necessary pressure for the completion of the drainage, sewerage, and water supply systems, all of which were in full operation by 1909. A historian of New Orleans called the installation of these systems "the most significant incident in the history of New Orleans" during the first quarter of the twentieth century. After 1905 cisterns in the Crescent City were inspected annually to see that they were oiled and screened properly--until 1918 when all cisterns in the city were ordered removed.⁶¹

In August of 1906 when one case of yellow fever

⁶⁰Matas, "A Yellow Fever Retrospect and Prospect," loc. cit., 468.

⁶¹Kendall, History of New Orleans, II, 525-26, 559, 575-79.

occurred in New Iberia, Louisiana, the State Board of Health immediately took charge in that community and promoted a thoroughgoing campaign of fumigating and screening. The patient recovered and no other cases occurred. The State Board was never able to determine the source of infection.⁶² Perhaps that case may be accounted for by an infected Aedes aegypti which survived the winter and enjoyed an unusually long life; or perhaps the ailment was dengue fever rather than yellow fever. Whatever the explanation for the New Iberia case, the state was otherwise free of the disease in 1906, and since the unprecedented campaign of 1905 it has continued to enjoy a freedom from yellow fever which the nineteenth-century man would never have believed possible. The last yellow fever epidemic in the Crescent City, in 1905, was also the last yellow fever epidemic within the United States. Actually, there was no excuse except skepticism, official neglect, and public apathy for the outbreak of yellow fever in New Orleans and elsewhere in 1905. Finally, under the lash of the Saffron Scourge, masses of persons aroused themselves from the

⁶²Report of the Louisiana State Board of Health for 1906-1907, 21, 26-27.

normal state of apathetic resignation to fight and to conquer the pestilence and furthermore to take the necessary precautions to avoid its future recurrence.

The necessary precautions included adequate quarantine based on the principle of mosquito transmission, together with the attempt to eliminate the yellow fever mosquito in Louisiana and elsewhere. In spite of the protests of adamant states-rightsers, federal control of maritime quarantine came on the heels of the 1905 outbreak. As for the Aedes aegypti, although controlled to a high degree, the pest is still with us. Yellow fever has been banished from the country and is kept in permanent exile through the vigilance of federal quarantine authorities and the careful supervision of travel to and from yellow fever areas which still exist in Latin America and Africa. Such public health protection in this day and age is taken for granted; people for the most part are blissfully unaware of the dangers lurking beyond the confines of protective barriers. As common through much of the nineteenth century as "cancer" is now, as much talked about, feared, and even less well understood, yellow fever today is about as unfamiliar to the man on the street as bubonic plague.

YELLOW FEVER IN LOUISIANA, 1905

	<u>Cases</u>	<u>Deaths</u>
Orleans Parish	3,402	452
All other parishes	<u>5,919</u>	<u>536</u>
Totals in Louisiana	9,321	988

TWENTY-EIGHT PARISHES AFFECTED:

Acadia
 Avoyelles
 Ascension
 Assumption
 Calcasieu
 Caddo
 East Baton Rouge
 East Carroll
 Iberia
 Iberville
 Jefferson
 Lafourche
 Lafayette
 Madison
 Natchitoches
 Orleans
 Plaquemines
 Rapides
 St. Charles
 St. John
 St. Bernard
 St. James
 St. Tammany
 St. Mary
 Terrebonne
 Tangipahoa
 Tensas
 Vernon

CHAPTER VII

THEORY AND CONTROVERSY: NATURE, CAUSATION, AND TRANSMISSION OF YELLOW FEVER

For well over a century the mystery surrounding yellow fever's nature, causation, and transmission plagued every medical philosopher who attempted to formulate an explanation. The sudden appearance of the epidemic disease in a community, its irregular spread, revolting symptoms, and fatal effects created a terrifying situation which demanded explanation. Yet in terms of the epidemiological concepts available in the eighteenth and nineteenth centuries, an adequate interpretation proved impossible. Transmitted by the yet-unsuspected mosquito, yellow fever until after 1900 exhibited an enigmatic quality always just beyond the grasp of the theorists.

Nevertheless, theorists abounded, and in the dark arena of yellow fever philosophy each contender chose his weapons and dogmatically took up the combat with those defending opposite viewpoints. Once an individual had

committed himself to a position, it became rather like an extension of his personality, and he felt compelled to defend it even as his honor. Sometimes the intense personal antipathy resulting from a controversy actually led one physician to invite another to a meeting on the dueling field. On one occasion, two doctors in Jamaica terminated their debate on the nature of yellow fever with a duel in which both men were killed.¹ Most of the battles, however, were waged on the field of the printed page, by means of scathing book reviews and rejoinders, journal articles contradicting other journal articles, and letters to editors. The quantity of literature produced on the subject of yellow fever therefore increased to a tremendous volume. Of all the medical questions of the late eighteenth and nineteenth centuries, probably none other provoked a greater consumption of ink and paper.

Debated, modified, and amplified into countless variations by the determined yellow fever philosophers, epidemiological concepts in the late eighteenth and through much of the nineteenth century were scarcely different from

¹N. O. Med. & Surg. Jour., III (September, 1846), 165.

those which had been employed ever since the time of Hippocrates. For centuries three fundamental ideas had been used to explain disease: epidemic constitution of the atmosphere, local miasmatic influences, and contagion. Some diseases were obviously communicable through direct contact or association and hence recognized as contagious. Other diseases were much more difficult to explain before the knowledge of germs, human and animal carriers, and insect vectors became available in the latter nineteenth century. Those maladies requiring unknown intermediary influences mysteriously seemed to travel from person to person and place to place. Laymen through the ages tended to support the doctrine of contagion as a primary force in the spread of almost all diseases, while physicians frequently opposed that view. Medical men emphasized atmospheric and local conditions to explain the causation and transmission of those epidemic diseases which seemed to depend on something other than direct contact.²

Defending the position of pre-modern medical thinkers, a twentieth-century medical historian has contended that "We cannot dismiss the resistance of the medical

²Winslow, Conquest of Epidemic Disease, 181-82.

profession to the doctrine of contagion as merely an evidence of hidebound conservatism. There were sound reasons for this attitude." The layman intuited the general outline of contagion in the progression of any epidemic disease as he observed its spread from one locality to another. The medical man, however, who knew the details and the erratic course of certain diseases understood that the theory of contagion as then formulated could not account for all the facts. Contagion was conceived by medical philosophers to be the direct transmission of some "chemical or physical influence" from a diseased person to the next victim by means of personal contact, or breathing the infected air around the patient, or contact with materials infected by the patient. Some diseases clearly exhibited this tendency to spread on direct contact. But the medical philosopher also knew that all diseases did not operate in this manner. Cases frequently occurred without direct exposure to prior cases; furthermore, direct exposure to a patient often failed to produce the disease in the person exposed. Hence, the facts relating to the origin and spread of many epidemic diseases simply could not be explained by the narrow concept of direct transmission in the days before the role of living

microorganisms, carriers, and insect vectors was understood.³

Those widespread diseases which could not be accounted for by the theory of contagion could seemingly be more adequately explained by two other abstract but plausible concepts. These concepts as formulated in the second century A.D. by Galen, a Graeco-Roman physician, dominated medical thinking until the validation of the germ theory by Louis Pasteur and others in the latter nineteenth century. Although recognizing certain maladies as communicable by direct contact (contagion), Galen explained widespread epidemics in terms of local miasms and the condition of the atmosphere, both rather nebulous conceptions. Miasms included all those pestilential emanations supposedly arising from decaying animal and vegetable materials, swamps, stagnant water, and filthy living conditions in general. Presumably, such noxious effluvia polluted the air and when inhaled or otherwise absorbed into the system resulted in disease. Epidemic constitution of the atmosphere is a somewhat broader concept and even more elusive. It refers to an atmospheric condition produced in part by

³Ibid.

miasms, but also influenced by the weather, that is, by excessive heat and dampness. Sometimes even astronomical influences such as comets and meteors were believed to play a role in creating an appropriate atmospheric medium for the widespread occurrence of a particular disease.⁴

In addition to local disease-bearing effluvia and an atmosphere influenced by climatic and other forces, another factor had to be included in Galen's scheme: individual predisposing causes, which were necessary to explain why the external causes in a given area affected some but not all persons. Within a contaminated atmosphere, those persons accustomed to an inactive and intemperate existence and suffering a "general obstruction of the pores" would be more prone, said Galen, to inhale and harbor the seeds of disease than would the active, temperate, wholesome individual.⁵ Through the centuries Galen's epidemiological constructs persisted as physicians applied the vague but then plausible explanations to various epidemic diseases, modifying the component causes to fit the situation at hand.

The severe yellow fever attacks along the Atlantic

⁴Ibid., 72-73.

⁵Ibid., 74.

coast of North America in the latter eighteenth century, and particularly the Great Epidemic of 1793 in Philadelphia, occasioned the application of existing epidemiological opinions to explain the behavior of the Saffron Scourge. In the 1790's two important American epidemiological thinkers, Benjamin Rush and Noah Webster, set forth the ideas regarding yellow fever which persisted in American medical thought throughout most of the nineteenth century. Dr. Benjamin Rush, a Philadelphia physician, was one of the most influential medical philosophers of his time, not only in relation to yellow fever but to the subject of disease and therapeutics in general. And in an age before medical knowledge was far removed from other fields of thought, Noah Webster, famed Connecticut journalist and lexicographer, also delved into epidemiology and in 1799 published a two-volume History of Epidemic and Pestilential Diseases. This work of Webster's recently has been evaluated as the best summary of epidemiological thought at the beginning of the nineteenth century, as well as one of the best digests of earlier opinion on the subject.⁶

⁶Ibid., 196, 215.

Both Rush and Webster first toyed with the idea of contagion as a possible secondary factor in the spread of yellow fever, but both eventually came to deny altogether the influence of contagion in that disease. Ultimately insisting that yellow fever definitely was not contagious, Rush and Webster also denied that the disease was imported into the country, and hence opposed quarantine measures. Instead they declared yellow fever a product of local miasms generated by decaying animal and vegetable matter and influenced by heat and moisture. Therefore, they favored sanitary measures for the removal of local causes.⁷

Both men believed in the influence of the epidemic constitution of the atmosphere, but Webster emphasized this factor more strongly than Rush. Webster treated the pestilential condition of the atmosphere as a primary force which spread over many parts of the world at one time, interacting with epizootics (animal epidemics), earthquakes, volcanic action, and comets. While Rush noted the presence of mosquitoes in large numbers, the abundance of dead cats, and the occurrence of a meteor as signs of an essentially unhealthy atmosphere, he gave more

⁷Ibid., 196-235.

attention to the influence of local miasms in the production of yellow fever. Furthermore, he believed that individual "predisposing" and "exciting" causes, such as fatigue, intemperance, fear, and grief, supplemented local effluvia in the development of yellow fever.⁸

In the writings of these two men one finds all the component elements which would be juggled about into varying combinations by countless nineteenth-century physicians in the attempt to describe those conditions which produced a yellow fever epidemic. Those who accepted contagion, including many more laymen than physicians, ordinarily favored quarantine to halt the importation of the disease. Those who believed in local and atmospheric influences generally denied contagion and importation and thus opposed quarantine; instead, they promoted sanitary measures designed to eliminate pestilential effluvia deriving from filth and decay.

During the decade in which Rush and Webster were writing on yellow fever, New Orleans experienced its first great epidemic of that disease. According to Baron Joseph X. Pontalba, the people of New Orleans and many of the

⁸Ibid.

physicians identified the epidemic disease of 1796 with the yellow fever of Philadelphia and believed it had been brought into New Orleans by the Americans. On the other hand, Pontalba himself, as well as Attorney-general Don Gabriel Fonvergne, blamed noxious effluvia for contaminating the atmosphere and creating the pestilence in New Orleans.⁹

As yellow fever continued to appear almost annually in New Orleans after 1796, the doctrine of local miasms gradually took precedence over the importation theme. Travelers in New Orleans and Louisiana in the early 1800's invariably commented on the yellow pestilence for which New Orleans was rapidly acquiring a notorious reputation. Almost without exception, the commentators attributed yellow fever to morbid effluvia in the atmosphere, deriving from filth and acted upon by the excessive heat of the climate. Most of them emphatically denied that the disease was personally contagious.¹⁰

⁹Pontalba to wife, September 6, 11, 19, 24, 1796, loc. cit., 274, 284, 300, 312; Gayarré, History of Louisiana, III, 375; Records of the City Council of New Orleans, Book 4079, Document 259, October 21, 1796.

¹⁰François Marie Perrin du Lac, Voyage dans les Deux Louisianes . . . en 1801, 1802 et 1803 . . . (Paris, 1805),

The observations and comments of the travelers indicate that the theory of local causation was coming to predominate over contagion in both the medical and the lay mind. Nevertheless, the question was still a debatable one throughout the country wherever yellow fever appeared. For example, The Medical Repository, published in New York in the late eighteenth and early nineteenth centuries, filled its pages with articles, reviews, and notices concerning yellow fever visitations in various American port cities. The journal articles dealt with recurring controversial issues involving yellow fever's contagious or non-contagious nature; its imported or local origin; its prevention by quarantine or sanitation--all issues which would persist for many decades. While some physicians advocated the doctrine of contagion, the majority of medical writers opposed that view and supported instead the influence of miasma.¹¹

One of the most obscure abstractions advanced in the

trans. as Travels Through the Two Louisianas . . . in 1801, 1802, & 1803 (London, 1807), 7; Amos Stoddard, Sketches, Historical and Descriptive, of Louisiana (Philadelphia, 1812), 171; Berquin-Duvallon, Travels, 115.

¹¹See The Medical Repository (New York), 1797-1809.

nineteenth century to explain the origin and causation of pestilential yellow fever appeared in a pamphlet by an unnamed author, reviewed in The Medical Repository in 1803. Accepting the ancient doctrine of the four basic elements which composed all things (earth, air, fire, and water), the author added two more elements from his own creative imagination, electrical fire and a universal agent which he termed "Mother." This last named metaphysical entity, "Mother," was described as "the great agent of vegetable and animal life." Ordinarily, "Mother inhabited the earth's surface, but under certain circumstances (undefined), it was forced far down into the earth, eventually to rise again to the surface of its own power. Usually, "Mother" emerged in a pure state, but sometimes on the way up to the surface it became polluted by combining with putrefying elements, particularly in hot weather. Under those circumstances "Mother" became "vitiating and venomous" and in its transformed condition rose upward and "defile[d] the earth and the water through which it pass[ed]." The reviewer called this theory "an old woman's story" and dismissed the work as sheer nonsense.¹²

¹²Ibid., VI (1803), 417.

Unquestionably, the "Mother" notion was one of the more extreme among the many metaphysical constructions in the realm of epidemiology. But it should be noted that the concept of epidemic constitution, although widely accepted and taken seriously, was no more open to analysis and description than "Mother." One might almost suspect that the pamphlet was conceived as satire on the epidemiology of the age but for the numerous other conceptions produced at the time which are equally absurd today.

While American medical thought became more and more involved in elaborating the patterns of local and atmospheric influences, an English physician, Colin Chisholm, published a work in 1809 to correct "the pernicious doctrine" so popular among American physicians regarding pestilential yellow fever. Arguing strongly against local causation by miasmata, heat, moisture, and putrefaction, he supported personal contagion and transmission through clothes or other fomites. If of local origin, why had yellow fever suddenly gone on a rampage in North America in the latter eighteenth century? Had the cities become filthier overnight? Dr. Chisholm did not think so. As evidence in favor of contagion and importation, he cited many examples of cases which had occurred after direct

contact with persons or incoming vessels. Furthermore, Chisholm dismissed the mystical epidemic constitution of the atmosphere along with the supposed connection of disease with eclipses, comets, volcanoes, and earthquakes as mere superstitions, coincidental factors but not causal.¹³

Nevertheless, the "pernicious doctrine" continued to find favor among American physicians, particularly in New Orleans where the annual appearance of the fever from 1817 onward provided ample experiential data about which to theorize. In the midst of the New Orleans epidemic of 1817, the Louisiana Courier published an article entitled "The Prevailing Fever" signed by "Philanthropy." Although a citizen with "no pretensions to medical knowledge" except that obtained from practical observation, the writer offered his conclusions to the public for consideration. His observations had convinced him that the fever resulted from local causes and was not contagious at all. Common to

¹³See Colin Chisholm, A Letter to John Haygarth . . . from Colin Chisholm . . . author of An Essay on the Pestilential Fever: Exhibiting Farther Evidence of the Infectious Nature of This Fatal Distemper in Granada, during 1793, 4, 5, and 6, and in the United States of America, from 1793 to 1805: in order to Correct the Pernicious Doctrine Promulgated by Dr. Edward Miller, and other American Physicians . . . (London, 1809).

the south Atlantic and the southwest states, the disease varied in malignancy not only because of variations in soil and climate from place to place and time to time, but also because of the predisposing influences within those persons residing in the area of contamination. In spite of the different degrees of virulence, he believed this "inflammatory bilious fever," wherever it occurred, was caused by "miasmatic exhalations produced by the ardent rays of a vertical sun, striking against the earth's surface, and operating on putrescent vegetable matter."¹⁴

Also in 1817 in a similar vein, Dr. Jabez Heustis, practitioner in New Orleans, summarized his views of yellow fever, delineating three types of causes. The remote cause consisted of "marsh miasmata"; the predisposing cause, the constitution of an individual not accustomed to the climate; the exciting cause, a state of intoxication or exposure, perhaps to excessive heat or rain. Sometimes miasmata alone might be potent enough to produce a serious attack, he believed, even without the other influences. A confirmed non-contagionist, Heustis claimed he had never seen a case of yellow fever transmitted from one individual

¹⁴Louisiana Courier, September 10, 1817.

to another.¹⁵

Drs. Gros and Gérardin in reporting to La Société Médicale on the New Orleans epidemic of 1817 concluded that the fever had been caused by the "peculiar topography" of New Orleans, the abundant rains and excessive heat of the summer, and the influx of numerous strangers to the city. The disease had not been contagious, they declared, but under certain circumstances they believed it might assume the quality of contagion. The committee appointed by La Société Médicale to investigate the yellow fever epidemic of 1819 reached similar conclusions. They attributed the fever of that year to the burning heat of July, August, and September, frequent rains, and stagnant water in the swamps. The committee described the New Orleans fever of 1819 as neither contagious nor imported, but rather indigenous, that is, of spontaneous origin.¹⁶

In 1820 when the Physico-Medical Society of New

¹⁵Jabez W. Heustis, Physical Observations and Medical Tracts and Researches, on the Topography and Diseases of Louisiana (New York, 1817), 113-14.

¹⁶Jones, Medical and Surgical Memoirs, III, pt. 1, cxlii.

Orleans, the organization of American physicians, appointed a committee to investigate the yellow fever outbreak of that year, the committee decided to avoid the controversy over contagion and non-contagion and simply noted in their report that the earliest and latest cases had appeared on board ships at the wharves. Further, they suggested that the filthy condition of the vessels together with the accumulated filth of the city bore some relationship to causation.¹⁷

In addition to the reports of medical societies, the writings of physicians in New Orleans reflect the increasingly firm medical opinion in favor of local causation. Dr. Jean Louis Chabert, physician from France who practiced medicine for a time in New Orleans, published a work on yellow fever in 1821 in which he set forth his opinion that the fever was not caused by a specific contagion transmitted from person to person, but instead by deleterious miasms intensified by heat and humidity.¹⁸ Another French

¹⁷Report of the Committee of the Physico-Medical Society of New Orleans, on the Epidemic of 1820 (New Orleans, 1821), 5.

¹⁸Jean Louis Chabert, Réflexions Médicales sur la Maladie Spasmodico-Lipyrrienne des Pay Chauds Vulgairement Appelee Fièvre Jaune (Nouvelle-Orléans, 1821), iii.

physician, Dr. Pierre F. Thomas, on observing yellow fever in New Orleans in 1822, also attributed the pestilence to "les miasmes délétères" emanating from the putrefaction of stagnant waters and vegetable and animal matter. He saw no need to demonstrate the proposition of non-contagion, a proposition almost universally accepted by physicians who had observed several epidemics. As far as he was concerned, there was no room for argument; that yellow fever was not contagious seemed a clear truth.¹⁹

The non-contagious nature of yellow fever might have been clear to Dr. Thomas, and by this time to the majority of the medical profession as well, but it was by no means clear to all observers of yellow fever epidemics in New Orleans. In his address to the Louisiana legislature in January of 1818, Governor Jacques Villeré, a determined advocate of contagion and quarantine, urged the passage of laws to establish safeguards against the pestilence. The Governor was not alone in his contagionist views; the Louisiana legislature in March of 1818 provided for the establishment of a quarantine station on the Mississippi River and a Board of Health to administer the

¹⁹Thomas, Essai sur la Fièvre Jaune d'Amérique, v, 65.

regulations. The appearance of yellow fever in the summer of 1818 seemed to discredit the efficacy of quarantine and with it the doctrine of contagion, and in March of 1819 the quarantine act of 1818 was repealed.²⁰

In the summer and autumn of 1819 New Orleans experienced another dreadful visitation of yellow fever, even worse than the epidemic of 1817. Again in 1820 the scourge carried off a considerable number of victims. In November of 1820 Governor Villeré, still arguing the cause for contagion, urged the legislature to pass new quarantine laws. Realizing that the medical profession of New Orleans generally subscribed to the opinion that yellow fever was not contagious, the Governor still contended that the disease was both imported and contagious and not an indigenous product.²¹

In his inaugural message in December of 1820, Villeré's successor, Governor Thomas Bolling Robertson, also recommended the passage of quarantine legislation against yellow fever. Finally, in February of 1821 the

²⁰Jones, Medical and Surgical Memoirs, III, pt. 1, cxliv.

²¹Ibid., cxliv-cxlv.

Louisiana legislature again passed an act establishing quarantine on the Mississippi River and creating a Board of Health for New Orleans. That summer and autumn passed with only a few cases of fever and the quarantinists gained a point; but the following August, 1822, witnessed the outbreak of the most devastating epidemic up to that time, and the local causationists were quick to call attention to the futility of quarantine against a disease so obviously indigenous. After the epidemic of 1822, Governor Robertson was ready to admit that the efforts at legislating against the fever had been in vain. "It is an idle waste of time for me to inquire into the causes, origin and nature of this dreadful malady," declared the Governor. "The State resorted to quarantine, under the expectation that it would add to the chances of escape from this dreadful visitation. If this hope be fallacious, if no good effect has been produced . . . then should it be abandoned, and our commerce relieved from the expense and inconvenience which it occasions."²²

In spite of the failure to prevent an epidemic in 1822, the Board of Health expressed continued faith in the

²²Ibid., cxlvi-cxlviii.

doctrine of contagion and the potential value of quarantine, but the Board's arguments were not very convincing. On January 23, 1823, a large meeting of New Orleans citizens resolved that the quarantine regulations, proved useless by the late epidemic, were not only ineffective but also "oppressive and injurious to the commerce of this city." Those citizens addressed a memorial to the legislature requesting that the act of 1821 be annulled. When the House Committee on Quarantine Laws reported in 1823, it admitted that in spite of "the strictest compliance" the measures had thus far proved ineffective against yellow fever. Nevertheless, the committee recommended that quarantine be continued in force "because it had not been tried sufficiently long, and because other States had similar regulations." Hence, for two more years Louisiana lawmakers took no action on the matter. The year 1823 was relatively healthy; but in 1824, although the fever did not rage on a grand scale, a sufficient number of yellow fever cases and deaths occurred to undermine still further the contagionist-quarantine position and give weight to the arguments of the local causationists. Ultimately, in February of 1825 the Louisiana legislature abolished its second experiment with quarantine barriers, and not until 1855 did the

State of Louisiana again provide for such restrictions.²³ For about three decades then the local causationists were in the ascendency. The pro-contagion and quarantinist viewpoint remained in abeyance until the widespread epidemics of the 1850's once more provided sufficient evidence to shake the foundations of the miasmatic position.

Although the majority of the medical profession adhered to the theory of local causation, there was never a time when contagion was completely without supporters. The severe epidemics of the 1840's stimulated a renewed clash of opinion as heretical contagionists sought to dissent from the prevailing medical doctrine. The establishment in 1844 of the first medical journal in Louisiana and the South, the New Orleans Medical Journal, undoubtedly stimulated the philosophical jousting by providing a ready medium of expression for the contenders. The first two issues of the journal contained at least six or seven lengthy articles on yellow fever. In the second issue the editor expressed the hope that "we shall not fatigue our readers with the subject of Yellow Fever; [but] it is the great disease of our City and region, and in as much as

²³Ibid., cxlviii-cxlix.

very discordant opinions in relation to it seem to prevail, we think it deserves a patient, and thorough investigation."²⁴

In the July, 1844, issue of the New Orleans Medical Journal Dr. P. H. Lewis of Mobile reviewed two papers which had been read before the Mobile Medical Society in June, both advocating the contagious nature and foreign origin of yellow fever. The ideas set forth in the two works indicate the persistent strength of contagionism; the tone of Dr. Lewis's reviews and the rejoinder to one of those reviews is representative of the extremely personal nature of the nineteenth-century controversies and goes far in explaining how bitter antagonisms were developed.

In one of the papers, "Observations on the Epidemic Yellow Fever, of the South West," Dr. J. W. Monette of Washington, Mississippi, supported the view of yellow fever's contagious nature. Furthermore, he maintained that the disease was indigenous to the West Indies, but not to New Orleans nor to Mobile, where it only occurred when imported. According to Dr. Monette, the infection was transported from place to place in certain porous goods,

²⁴New Orleans Medical Journal, I (July, 1844), 94.

blankets, and feather beds, and was rendered more virulent by the heated atmosphere within the holds of vessels which transported those goods.²⁵

Point by point, Dr. Lewis disagreed with Monette, frequently destroying his position by reductio ad absurdum. "As for the importation of porous goods and blankets," stated Lewis, "it is a thing very improbable. We are constantly importing sugar, coffee, rum, and molasses from the West-Indies, but I never heard that those Islands exported manufactured goods to the U.S." Continuing in this vein, he jibed: "The feather bed theory is particularly objectionable. Who ever heard of a feather bed being brought from the West-Indies in the warm season. If such a thing has ever occurred, I would ask if it is possible any one could have slept upon it in July or August?" Ridiculing Monette still further, Lewis objected to his "anxiety to account for every thing. . . . The general outlines [of Monette's paper] would have done very well, but its particularity had destroyed the force of the whole instrument." Undoubtedly, if the case had been otherwise, Dr. Lewis would have criticized its generality since he

²⁵Ibid., 31, 35.

basically disagreed with all of Dr. Monette's premises. In short, Lewis denied the doctrine of contagion altogether and cited many instances of close contact with fever patients which failed to produce new cases of the disease.²⁶

Dr. Lewis also reviewed "Sketches from the History of Yellow Fever, Showing its Origin, together with Facts and Circumstances, disproving its Domestic Origin, and demonstrating its Transmissibility," by Dr. W. M. Carpenter, professor in the Medical College of Louisiana in New Orleans. First of all, Lewis expressed his regrets that Dr. Carpenter should have been the author of such a work. Having looked forward to Carpenter's study, he was disappointed to find that "it only contains a collection of questionable facts and errors, which have for many years, been considered by the ablest Reviews of the world, as not worthy of notice." Noting the basic similarity of the views advanced by Carpenter and Monette, Lewis considered both papers equally unacceptable. Carpenter, however, believed yellow fever to have been imported originally to the West Indies from Africa (a thesis generally accepted today), while Monette maintained that

²⁶Ibid., 31-41.

the disease was indigenous to the West Indies. Except for this difference the papers followed a similar line of thought.²⁷

The arrogant Dr. Lewis of Mobile summed up his disdainful opinion of the two works under review with these remarks: "It is to be regretted that the labour and talent employed on these works should have been so misdirected. Systems, doctrines and theories when embraced with zeal, imperceptibly bias and derange the judgment." Adding the final blow, he declared, "If we desire to enter the boundless field . . . with a spirit of true philosophy, anxious to sift truth from the immense and ill digested mass of so called medical literature that encumbers our path, we must lay all these aside. Then, and not till then, will the truth be evolved."²⁸

Had Dr. Lewis not been a considerable distance from New Orleans and Washington, Mississippi, when the July issue of the medical journal came off the press, he might have had two challenges to deal with. Under the circumstances, however, Carpenter apparently ignored the denunciation and Monette resorted to the printed page in rejoinder

²⁷Ibid., 42-43.

²⁸Ibid., 44.

to Dr. Lewis. In the October issue of the New Orleans Medical Journal Dr. Monette acknowledged his respect for the Mobile Medical Society and all its members and their investigations of yellow fever, but stated that he failed to see "that this [Lewis's] review has thrown much light upon the difficulties . . . nor can I believe that the style of the article, or its mode of investigation, will ever become a model for the liberal and enlightened of the medical profession." He felt that "no display of wit or of ridicule itself" could ever substitute for "enlightened research, or ingenuous argument, in confuting our errors, or in illuminating the path of truth." Noting that the subject of yellow fever, in spite of all previous investigation, was still shrouded in uncertainty, Dr. Monette saw no other path to the truth except through observation, without prejudice or preconceptions, but with a liberal and open spirit of inquiry. Furthermore, he proceeded to correct Lewis's misinterpretations of his paper, claiming that he had not advocated the "unconditional contagious nature of yellow fever" and denying other extreme views attributed to him by Dr. Lewis.²⁹

²⁹Ibid., I (October, 1844), 178-79.

In retaliation for the harsh treatment of his work, Monette suggested that Lewis failed to comprehend the train of his argument. Otherwise, "the critic, would not deem it so strange, that I should have attempted to explain, or illustrate so many particulars; and he might see the impropriety of hastily making general conclusions from isolated facts; a mode of reasoning so opposite to that laid down by the immortal Bacon." In conclusion, the Mississippi doctor rested his case with the medical profession at large, "believing that the intelligent and discriminating will award to me such judgment as is right and proper."³⁰ Such caustic controversy, illustrated so well by the Lewis-Monette encounter, was common throughout the nineteenth century. Highly articulate medical thinkers wielded their pens in venomous combat with each other, fighting within a rationalistic framework over fragmentary abstractions and partial truths, and, in the process, needlessly creating bitter enemies.

Even if one accepted the orthodox miasmatic theory, there were countless ways to arrange the various possible factors into different combinations, thereby multiplying

³⁰Ibid., 179-80.

the theories and opening the way to further disagreement. In 1843 Dr. P. A. Lambert read an essay on yellow fever in French before the Louisiana Medico-Chirurgical Society in which he set forth a slightly different formulation of the miasmatic view. In May, June, and July, he declared, under the influence of the burning sun, the stagnant waters around New Orleans evaporated, and in ascending, the particles saturated the air and later fell as rain. Thus the miasms were transported into higher regions of the atmosphere in the aqueous vapor and later in descending as rain, scattered disease over many regions. As further evidence, he contended that the coming of frost terminated a yellow fever epidemic by condensing the deadly particles. "It is impossible," he admitted, "in the present state of science, to determine the nature of these miasms, and to say what are the material causes and conditions of their development." Their existence was known only by their effects, he affirmed; otherwise, nothing was clear. Variations in the quantity of miasms probably accounted for the different degrees of yellow fever's virulence. Furthermore, Dr. Lambert believed that miasms were clearly

influenced by meteorological conditions.³¹

In addition to those miasms arising from putrefaction in stagnant water, he postulated as additional miasm expelled from the system of the yellow fever patient in his excretions and his breath. "This being premised," said Lambert, "we can understand how Yellow Fever may be communicated to unacclimated persons, by means of the miasm which is exhaled from a large number of persons, congregated in small and badly ventilated apartments." With few exceptions, he believed the infection was acquired through "pulmonary absorption."³² Hence, Dr. Lambert made room for a kind of "contingent contagion" within the framework of the miasmatic explanation.

In March of 1847 in the New Orleans Medical and Surgical Journal, Dr. John Harrison, professor of physiology and pathology at the Medical College of Louisiana, published his "Speculations on the Cause of Yellow Fever," advocating his own particular formulation of local causation. In a lengthy demonstration he arrived at this conclusion: Under certain meteorological conditions, from the accumulated filth of large cities (mainly the animal matter of

³¹Ibid., I (July, 1844), 4-5.

³²Ibid., 13.

urine and feces), a "poison" is generated, "which, either in the form of a volatile oil, or other organic matter, held in solution by ammonia, floats in the atmosphere; is inhaled during respiratory movements; is taken into the circulation and poisons the system." For remedial measures, he suggested the removal of filth from streets, gutters, private yards and lots, the emptying of privies at least once every three months, the paving of streets, and the construction of an effective system of drainage and water-works.³³

Dr. Harrison performed extremely well the task that most medical writers attempted, that is, the exercise of Aristotelian logic in the delineation of his argument. Like some latter-day scholastic, he lined up the possible alternatives to the question at issue and posed objections which destroyed each proposition in turn except one. Then he proposed the possible objections to that proposition and answered them one by one, thereby disposing of the objections and leaving the victorious principle undisturbed and supposedly established as sound doctrine. In the

³³N. O. Med. & Surg. Jour., III (March, 1847), 580, 591-92.

process he cited many cases as evidence and quoted liberally from "authorities." Unfortunately, such dabbling in metaphysics failed to solve the concrete problem of yellow fever.

When the severe epidemic of 1847 stimulated still further speculating and writing on yellow fever, the editor of the New Orleans Medical and Surgical Journal commented that it might seem useless to write anything more on the subject: "We really believe that the archives of the Profession already contain every thing that need be said on the subject; and yet the world is but little wiser in regard to it than it was half a century ago." All the questions regarding the cause, nature, transmission, and treatment of the disease remained undecided, and no real agreement existed on any aspect of the subject. The editor observed that "Medical are very much like religious controversies: in either case, when men have formed and expressed opinions, they seem to shut their eyes against all farther light, and hold on to them with like pertinacity." Then why should anything further be written on a subject already so fully discussed? Not with the vain idea of changing those who had already formed opinions, the editor asserted. Nevertheless, he felt it necessary to

pass along all observations to those who would come later with the hope that someday someone might be able to analyze the information, "winnow the grain from the chaff, and establish the truth by facts and logic." The late epidemic of 1847 had provided many interesting facts, which, said the editor, "would give rise to deductions which would probably vary according to the diversity of intellect by which they were examined."³⁴ In dealing with so many unknown variables, every man was his own yellow fever philosopher. Such relativism in history, religion, or philosophy may be unavoidable, and although perplexing, its concomitant damages are confined largely to the intellectual sphere; in medicine, it is more a matter of life and death. Yet the clues which would dissipate the cloud of relativism surrounding yellow fever long remained hidden from the human intellect.

In 1849 the New Orleans Medical and Surgical Journal described one venture into the field of quasi-scientific activity which attempted to find a substitute for the vague action of malaria (polluted air) in the production of fever epidemics. Sir James Murray of Edinburgh, a distinguished

³⁴Ibid., IV (January, 1848), 537, 540.

physician and "elegant scholar," had recently advanced a theory on the electrical cause of epidemic disease which excited some interest in America. In attempting to replace miasmata with electricity, however, the Scottish doctor simply exchanged one intangible for another. Describing the widespread influence of the new "mysterious agent," he affirmed: "It is able to separate and again unite the elements of water; to tear metals from their oxides; to shake the clouds in thunder; and to operate in developing the evolutions of crystals." But it possessed still further powers: "In the form of currents, it convulses the muscles of lifeless animals; and it flies, in its condensed form, instantaneously, through a circuit of many persons, producing a manifest shock in them all." Admitting that he was only hypothesizing a connection between electricity in the atmosphere and pestilential fevers, Sir James Murray promised to follow up his experiments with further research. The editor of the New Orleans medical journal suggested that the idea was worthy of further investigation.³⁵

Apparently, it would take more than electricity to

³⁵Ibid., V (May, 1849), 779.

shake the faith of Southern medical men in the wondrous powers of pestilential miasmata. In an article published in the New Orleans Medical and Surgical Journal in 1852, Dr. J. C. Massie of Houston, Texas, set forth his observations and deductions regarding the "circumstances which conspire . . . to produce a pestilence." Among the component factors, he listed irregular weather and local impurities, including putrefying animal matter, marsh effluvia, accumulations of human secretions and excretions, and vegetable matter decaying in stagnant water. Although an anti-contagionist, Massie admitted that a filthy vessel might convey a disease from place to place and that the infection might in a filthy area "find an affinity in the atmosphere" and "act as a spark to ignite the whole material." He considered it a great error, however, to blame contagion for the work of effluvia from accumulated filth and putrefaction. Hence, Dr. Massie was one of the medical thinkers who had decided that yellow fever, although non-contagious, might be carried from place to place, that the characteristics of contagion and transmissibility need not be inseparable. Regarding contagion itself, he said, "I hold that it is not a necessary incident to any disease of this [epidemic] class." Further, he denounced that

doctrine as a product of the "Romish Church." According to Dr. Massie, in 1545 when Pope Paul III wanted to remove the Council of Trent to Bologna, he seized upon the prevailing epidemic at Trent as a means to his own ends, proclaimed the disease contagious, and persuaded some physicians to support this view. Thus by authority of the Church, said Massie, the belief in contagion had been established and sustained through the ages. Even the traditional forty-day period of quarantine, he supposed, had been designed to correspond with the forty days of Lent. At least nine-tenths of the medical profession, he conjectured, would agree with him in saying that scientific investigation had failed to lend support to the doctrine of contagion in epidemic fevers.³⁶

If not nine-tenths, at least a preponderant majority of the medical profession would have agreed with Massie in 1852 on the non-contagious nature of yellow fever. But the Great Epidemic of 1853 would attract a number of supporters to the contagionist camp, for the extraordinary malignancy and widespread extent of that epidemic provoked a new outburst of speculation. Although some physicians

³⁶Ibid., IX (July, 1852), 35-40.

were converted to contagionism by the experience of 1853, many others found even more evidence to bolster their faith in miasmata. Dr. Erasmus Darwin Fenner of New Orleans, for years a staunch exponent of local causation, fell back as usual on the traditional combination of filth and the epidemic constitution of the atmosphere to explain the disaster of 1853. By itself, putrescent effluvia could not be the "sole cause" of epidemic yellow fever, he maintained, or New Orleans would suffer an epidemic every single year. Therefore, a combinative action of miasma and a "peculiar constitution of the atmosphere" was required to produce the pestilence. To account for the spread of the fever in 1853 to many places never touched before, Fenner believed the "epidemic constitution" covered a more extensive region than ever before. Within the boundaries of this peculiar atmospheric condition, wherever local causes were also present the two influences combined to generate the disease. Fenner did not say that yellow fever was never communicated from one person to another; he admitted that sometimes the disease might exhibit the quality of contagion. Although he himself had never seen a case caused by contagion, reliable testimony indicated that such cases had occurred. The majority of

the medical profession agreed that yellow fever seldom, if ever, spread by infected ships, goods, or persons. Therefore, if the disease were so rarely communicated by contact or association, independent of other influences, such communication might be considered the exception to the rule. Thus Dr. Fenner dismissed the doctrine of contagion in yellow fever.³⁷

At the close of the epidemic of 1853 a sanitary commission was created by the city government to investigate the facts of the late siege. In his portion of the final report, Dr. Edward H. Barton, chairman of the commission, concluded that yellow fever was not contagious and that the disease was only communicable within a foul atmosphere; that is, the disease could be propagated by an individual or a vessel only in an atmosphere favorable to its spread. Sporadic cases of fever might be produced by miasms from filth, but the meteorological element, or the unusual constitution of the atmosphere, also had to be present, he asserted, for the production of a full scale epidemic. Like Dr. Fenner, Barton believed that the conjunctive action of both influences, local and atmospheric,

³⁷Fenner, Epidemic Yellow Fever, 72-75.

was required for the development of an epidemic. Heat and moisture constituted the two most important elements in the climatic influence; malaria or miasmata included all impurities of the air resulting from filth and decomposition, such as street and kitchen offal and the refuse of stables, vacheries, soap and tallow factories, privies, cemeteries, swamps, hospitals, and crowded tenements. Whatever factors contaminated air, food, and water, Barton proposed to list among the local or terrene causes.³⁸

Further, to explain the spread of yellow fever over a vast portion of the South in 1853, Dr. Barton postulated that some "vast influences" or "apparent irregularity" had developed within the ordinary state of the atmosphere "that was at war with its being." He described the epidemic constitution as a combination of terrene and meteorological constituents arranged in some manner different from the normal condition. "We have no proof of anything specific," he said, "beyond this combination, and this is two-fold, the meteorological part probably forming the predisponent ~~is~~ innocuous without the other . . . the second is the

³⁸Barton, Cause and Prevention of Yellow Fever, x, xv, 70, 134.

local circumstances and influence--the true localising or fixing power."³⁹

The "false fact" of contagion had arisen, Barton declared, when a case of fever transported into an impure atmosphere was followed by other cases; but within a pure atmosphere other cases would not have developed. The defining characteristic of true contagion, he maintained, was its independence of climate, season, place, or atmosphere--its action under all circumstances. He considered the concept of contingent contagion a "medical misnomer." To say that yellow fever might become infectious under certain contingencies was to say only that it might be propagated in an impure atmosphere by the impure air introduced by persons, ships, clothing, or otherwise. Independent circumstances then accounted for the "seemingly contagious quality."⁴⁰

Finally, Dr. Barton felt that his facts and logic had demonstrated four postulates as clear truths: (1) that a close combination of meteorological and terrene conditions was absolutely necessary to the origin and transmission of yellow fever, (2) that all the terrene

³⁹Ibid., 49-51.

⁴⁰Ibid., 52, 61-62.

conditions might be removed by human effort, thereby (3) rendering the atmospheric element innocuous, and (4) that the "irrestible corollary" followed "that yellow fever is an evil, remediable and extinguishable by human agency." He hoped that a great sanitary reform movement might be instituted throughout the South. The idea that man could not alter the course of epidemic disease was positively un-American, he announced, and entirely out of step with the progressive spirit of the age. But he was convinced that sanitary measures to eliminate the local terrene influences would banish once and for all the scourge of epidemic yellow fever.⁴¹

Regardless of what Fenner, Barton, and many others might have thought about the causative powers of filth, one New Orleans physician during the epidemic of 1853 advanced a startling theory regarding the influence of filth. Dr. J. S. McFarlane, practitioner in New Orleans for some thirty years, addressed a letter to Mayor A. D. Crossman, which was published in the New Orleans Daily Delta on July 28, 1853. Observing that many physicians considered filth a factor in the production of yellow

⁴¹Ibid., 5-8.

fever, he stated, "That so far from believing that the filth, offal and impurities around and about us have anything to do with the formation of what physicians designate an epidemic constitution of the atmosphere, I believe that these very impurities . . . to a certain extent . . . are calculated to retard its formation."⁴²

This theory, like every other, found some supporters, but for the most part McFarlane was much criticized for his heretical doctrine by the newspapers and many of his colleagues. In a tirade denouncing Dr. McFarlane's extraordinary notion, the editor of the New Orleans Crescent sarcastically remarked that if filth were a protective influence, New Orleans was undoubtedly the healthiest city in the world. On another occasion, that editor suggested that a public laboratory be established to manufacture all sorts of nauseating fumes and that the citizenry be supplied with nose-bags containing these noxious vapors so highly praised by Dr. McFarlane.⁴³

To defend himself against the bitter denunciations of his fellow physicians, McFarlane attempted to make his

⁴²De Bow's Review, XV (December, 1853), 599-600.

⁴³New Orleans Daily Crescent, August 2, 8, 1853.

theory more explicit and intelligible in an article in De Bow's Review in May of 1854. In short, he believed that the pestilential atmosphere conducive to the production of intermittent, remittent, swamp, and congestive fevers served as a counteracting force to the development of a yellow fever atmosphere. As evidence, he pointed out that portions of the swamps behind New Orleans, into which the filth of the city drained, had been cleared of trees, partly drained, and bared to the burning heat of the sun during several years preceding 1853. In those years, the fumes emanating from filth exposed to the sun produced various forms of fever, but almost no yellow fever had occurred. In the summer of 1853, frequent rains and the interruption of the draining machines had left the filthy swamp covered with water which prevented the exhalations. Then intermittent and remittent fevers disappeared, and "yellow fever established his dread empire over our devoted city." Dr. McFarlane asked, "what extravagance could there be in describing the foul drainage and percolations, vegetable and animal, of the city of New-Orleans, when combined with the perishable deposit of the swamp . . . and declaring it as my opinion, that to a certain extent we might be protected from yellow fever by an

atmosphere teeming with their exhalations?" After his complicated explanation, he restated his firm opinion that miasmata from filth and swamps, when exposed to the burning sun, created an atmosphere productive of other fevers, but basically antagonistic to that required by yellow fever.⁴⁴

In a pamphlet published in 1853, Dr. McFarlane admitted that thus far nothing was known regarding yellow fever because "We are . . . as yet not even at the threshold of science." He then summarized his own "opinions" with force and vigor and an acid pen. He concluded that yellow fever was neither contagious nor produced by filth or decomposing matter. He considered quarantine, drainage, and sanitation futile efforts. Finally, McFarlane believed that yellow fever would eventually wear itself out in New Orleans and disappear, even as it had done in so many other places.⁴⁵

In the midst of all the medical philosophers, one physician in New Orleans more closely resembled a modern scientist in his approach to the yellow fever problem.

⁴⁴De Bow's Review, XVI (May, 1854), 463-66.

⁴⁵J. S. McFarlane, A Review of the Yellow Fever, Its Causes, etc., and an Interesting and Useful Abstract of Mortuary Statistics (New Orleans, 1853), vii, xii.

Dr. J. L. Riddell, a member of the Sanitary Commission of 1853, had reached conclusions slightly different from those of Dr. Barton. He agreed with Barton that yellow fever had not been personally contagious in 1853. But more chemist and scientist than philosopher, and not satisfied with the intangible properties of epidemic constitution, Dr. Riddell had attempted to delve more deeply into the causative forces. Previously, he had devised experiments to measure the amount of "organized matter" in the atmosphere while yellow fever was prevailing in New Orleans. From his investigations Riddell had discovered "myriads of microscopic motes" in the air and was convinced that the atmosphere contained countless other forms of organic life so minute as to elude observation even with the aid of the microscope. More important, he believed that the "living motes" in some manner produced the "miasmatic maladies."⁴⁶ By his interest in microscopic and ultra-microscopic organisms, Dr. Riddell was on the path which ultimately would point the way to the germ theory.

In his conclusions regarding the yellow fever of

⁴⁶N. O. Med. & Surg. Jour., VII (September, 1850), 172-76.

1853, Riddell attributed its infectious communicability to "poisonous matter (doubtless some of living organism) maturing its germs or spores . . . surrounded by confined or impure air; which germs became diffused in the impure atmosphere." Among the various conditions favorable to the development of the infection, he included emanations from putrefying matter, consisting of gaseous, liquid, and solid particles ("the pabulum . . . of cryptogamic growths") and the "presence of the specific organism whose perfected spores constitute the material cause of yellow fever." In calling attention to minute cryptogamia (plant life which propagates by spores) and in referring to a "specific organism" as yellow fever's "material cause," Riddell had obviously formed the conclusion that a specific microorganism, plant rather than animalcule, was the vital principle in the disease. With that conception, he was far ahead of his colleagues who were still dealing with the intangible compound essences of miasmata.⁴⁷

Writing in the 1850's, Dr. M. Morton Dowler of New Orleans assumed a rather negativistic position on the subject of yellow fever, rejecting all the various theories

⁴⁷Ibid., X (May, 1854), 813-14.

proposed over the years. In rejecting the idea that filth promoted the development of yellow fever, Dr. Dowler was, at least to that extent, in agreement with McFarlane, but every other notion he denounced. As for the filth theory, promoted by Fenner and Barton, Dowler declared that although he was no advocate of filth, it was "neither a basilisk nor a Gorgon's head; nor is it the cause of yellow fever." He considered the erratic spread of yellow fever sound evidence against the filth theory, since yellow fever exhibited no "special predilection" for locations characterized by excessive heat, moisture, or animal and vegetable putrefaction. "The ship-hold and gutter-philosophers desire to claim sway," he maintained, "and in their crusade against filth, on the yellow fever basis, go for expending millions of the public money, and devouring the commerce of New Orleans." He was of course referring to the increasing demand for sanitation and quarantine regulations. Not only did Dowler oppose the filth theory, but he also rejected Dr. Riddell's cryptogamic theory which he thought had been deduced primarily from the filth idea. "Strange fungi! strange gases! strange poisons! A strange foundation have the advocates of these theories! A strange pretense for all the extravagant systems of

disinfection, quarantines, and Quixotic schemes of drainage," exclaimed the iconoclastic Dr. Dowler.⁴⁸

On another occasion Dr. Morton Dowler made some interesting observations on the whole problem of yellow fever causation. In dismissing all the theories thus far advanced, he declared, "Whoever discovers the objective or external cause of yellow fever, must look beyond the crude dealings in gases, animalculae, cryptogamia, quarantine, filth, and meteorology which are now being exhibited before the world." Demonstrating considerable insight, he asserted, "It may or may not be in the power of man to grasp the secret, but if ever that is done new laws must be investigated and new problems solved. A higher scientific era will have been inaugurated."⁴⁹

According to Dowler, few persons in the medical profession would deny that almost nothing was known about causation. But, he observed, almost all medical writings on the subject presented a fine display of causes. "The writers cautiously make out these by giving a little 'meteorology,' a little 'medical topography,' a little

⁴⁸Ibid., XI (July, 1854), 43-44, 47-50.

⁴⁹Ibid., XI (November, 1854), 429.

'geology,' a little 'putrefaction and exhalation,' together with a very circumspect reference to the organic, microzoic, cryptogamic, electric, calorific, gaseous, and filth theories, and so forth." In this fashion a "very specious appearance" of knowledge and impartiality was created, and all the medical reader could determine was that no positive knowledge existed regarding causation. Sardonicly, Dowler remarked, "It does not comport with the dignity of authorship or professorship to say, 'I don't know.' It must be said gradually, and with the appearance of knowing everything." After having been a practitioner and a student for some twenty years, and having read and reflected so long on the subject of yellow fever, Dowler claimed he had never discovered any explanation of causation worthy of attention or belief.⁵⁰

In 1855 Dr. Dowler propounded a doctrine of hope for the eventual spontaneous cessation of yellow fever, not unlike McFarlane's suggestion in 1853. Although he rejected all theories as well as the proposed sanitation and quarantine programs, Dowler insisted that he was not painting a hopeless picture for New Orleans. On the contrary,

⁵⁰Ibid., 430.

he proposed a "doctrine of hope and consolation." When the population became stabilized and acclimated by fever attacks, he believed the disease would disappear of its own accord. Since yellow fever fed on strangers and a shifting population, when European immigration slowed down and finally ceased, the fever would lack new victims. Furthermore, widespread occurrences of the disease, as in 1853, would immunize many persons throughout the United States who might later move to New Orleans. Observing that yellow fever had been "emphatically a German and Irish disease," Dowler believed a halt to immigration would remove one source of the fever's fuel. The "unfeasible expedients" of sanitary reformism would bring nothing but "disappointment and heavy taxation," he maintained, but if allowed to run its course, ultimately the disease would burn itself out.⁵¹ Such a fatalistic, laissez-faire policy toward the pestilence found little favor with those who refused to believe the situation lay beyond the power of man.

Nevertheless, in the 1850's while the sanitationists preached reform, there were many others who failed to see

⁵¹Ibid., XI (January, 1855), 503-505.

in filth all the demons supposedly lurking there. In 1859 Dr. Edward Jenner Coxé, visiting physician at Charity Hospital, agreed with Drs. McFarlane and Dowler that filthy streets and gutters could not account for the development of yellow fever. Many localities filthier than New Orleans had never experienced yellow fever at all, he declared. But Coxé hastened to state that the denial of yellow fever's origin in filth was no argument in favor of filth, since clean streets and gutters were certainly desirable on other grounds.⁵²

Even the recently created State Board of Health noted in its report for 1857 that filth alone was apparently not sufficient to generate yellow fever. According to the Board, "If refuse organic matter in any of its forms . . . [has] any agency in the production of yellow fever, its attributes were fairly put to the proof this past summer on a scale of grandeur that would be shocking to the eyes of one accustomed to the filth of Constantinople or Cairo." For weeks the streets had remained uncleaned, while two of the city's largest hotels poured the refuse from their privies into one of the main streets.

⁵²Ibid., XVI (March, 1859), 173-74.

The refuse from Charity Hospital supplemented "the stifling current." Although gutters and canals were "seething and bubbling with their putrid waters," the several yellow fever cases which appeared in New Orleans, with few exceptions, remained in an unusually clean portion of the city. "If infectiousness were a property resulting from filth and putrescent organic matter," the Board of Health contended, "the whole city was a laboratory for its generation, unsurpassed in magnitude and extent. . . ." Yet the yellow fever of 1857 did not assume epidemic form.⁵³

While the filth theory was debated pro and con, the questions of yellow fever's portability and local or foreign origin engaged the attention of others, especially since the episode of 1853. In the report of the Sanitary Commission of 1853, Dr. Edward H. Barton had firmly denied the allegation of foreign importation, which "has proceeded from a patriotic, but mistaken impulse, which is pretty universal, as well among savages, as those more civilized, viz: never to acknowledge the paternity of a pestilence!" He was positive that the epidemic of 1853 had originated

⁵³Report of the Louisiana State Board of Health for 1857, 23.

in New Orleans.⁵⁴ On the other hand, Dr. J. L. Riddell had concluded that the yellow fever afflicting various towns and plantations throughout the South in 1853 had been transmitted from New Orleans. Although he conceded that the disease might sometimes originate in New Orleans, he believed the germs of the 1853 epidemic had been introduced from Latin America. Hence, Riddell advocated quarantine measures to detain and to fumigate filthy persons, clothing, and ships, as well as all goods from the West Indies, South America, and Mexico.⁵⁵

Another Southern physician stimulated by the epidemic of 1853 to re-explore the questions of yellow fever's transportability and the highly controversial doctrine of contagion, was Dr. J. C. Nott of Mobile, Alabama. The extraordinary spread of the pestilence in 1853 reopened the "long neglected idea of contagion" which Nott, like the majority of the medical profession, had considered obsolete. Believing the behavior of yellow fever too irregular to be explained by gaseous effluvia in the atmosphere, he saw the need to search for a more plausible

⁵⁴Barton, Cause and Prevention of Yellow Fever, 67.

⁵⁵N. O. Med. & Surg. Jour., X (May, 1854), 814.

thesis. Dr. Nott inclined toward the idea that the cause of yellow fever "exists in an organic form and possesses the power of propagation and progression by organic laws." Attempting to distinguish between two questions so often confused, transportability and contagion, he maintained that a disease need not be communicable from one person to another like smallpox in order for its germ to be transported from place to place in vessels or baggage. Earlier epidemics had provided evidence against contagion, but the conflicting facts of 1853 left Dr. Nott in a state of indecision on the subject, although he admitted his inclination to believe in the contagiousness of the disease. Transportability, he asserted, rested on an even firmer foundation than contagion since the fever had traveled to the various points along the coast and rivers which were frequented by vessels and railroad trains.⁵⁶

In 1848 Dr. Nott had published an article advancing the animalcular hypothesis as a better explanation of the "erratic habits" of yellow fever than any other theory yet set forth. Coming closer to the truth than any other medical thinker in the mid-nineteenth century, Dr. Nott had

⁵⁶Ibid., X (March, 1854), 571, 577-79.

also suggested the possibility that insects, the mosquito among others, might be related to the transmission of disease. But many objections were posed to the insect and animalcular hypothesis. One opponent said that none of the known animalculae (animal microorganisms) were poisonous; he had swallowed water on numerous occasions containing minute animal life without the least effect. Pointing out that one might also swallow viper's poison without perceptible effect, Dr. Nott declared, "By what various means the poison of insects or animalculae might be communicated through the air or directly to individuals, we know not."⁵⁷ In attempting to break with tradition and for postulating something other than the customary miasms, Dr. Nott deserves special recognition along with Dr. Riddell of New Orleans.

Like Dr. Nott, Dr. T. A. Cooke of Washington, Louisiana, supported the idea of yellow fever's transportability, as well as the animalcular theory, but denied that yellow fever was personally contagious. Convinced that the fever of 1853 had been transmitted from New Orleans to other points where it prevailed, he believed the "morbific

⁵⁷Ibid., IV (March, 1848), 563-601; X (March, 1854), 581.

cause" had been conveyed by effluvia from sick persons as well as by fomites. Fomites, however, carried the cause itself and if accumulated in a sufficient quantity would produce the disease in all persons "predisposed" to it. On the other hand, emanations from the sick were harmless unless the surrounding atmosphere was appropriate to allow for the propagation of disease germs coming from the body of the patient. "The facts in proof of the importation of the disease through the medium of such persons, and of merchandize," Dr. Cooke asserted, "are as numerous as the leaves on the trees, at least in the opinion of most country people destitute of prejudice, or a taste for metaphysical disquisitions." Believing in the foreign origin and importation of the disease to New Orleans and its transmission from that center to other Louisiana communities, Dr. Cooke along with many other "country people" strongly favored quarantine measures to prevent the future importation of the disease.⁵⁸

Although as factors in the chain of causation he listed a crowded population, summer heat, and an extraordinary condition of the atmosphere, in addition to the

⁵⁸Ibid., X (March, 1854), 606-608.

imported morbid influence, Dr. Cooke apparently had serious doubts about the validity of the traditional causes. He had observed that miasms, heat, dryness or moisture, emanations from filth, organic or inorganic poisons, and meteorological conditions, alone or combined into any possible arrangement, always encountered contradictions and therefore failed to provide an adequate explanation for the disease. Referring to the animalcular theory proposed several years before by Dr. Nott, Cooke declared, "I have long been inclined to the opinion that the time is fast approaching, when most febrile diseases will be attributed, and justly, to a similar cause--to an animalcular origin." On the subject of contagion, however, Dr. Cooke recognized that the yellow fever poison was essentially different in its action from contagion, which operated by personal contact without regard to zone, climate, season, or other influences. Somehow yellow fever was different; exactly in what manner it operated he could not say.⁵⁹

During the 1850's more and more people came to believe in the transportable nature of the disease, first

⁵⁹Ibid., 608-12.

from Latin America to New Orleans, then from the Crescent City inland or along the coast. Many laymen, particularly in the interior, were convinced by the epidemics of the 1850's that yellow fever was both transportable and contagious. More and more physicians came to accept the transmission of yellow fever from place to place by infected goods, but to most medical men the doctrine of personal contagion still remained unacceptable. There was too much evidence to the contrary. Contagious diseases like smallpox and measles followed certain discernible laws; yellow fever did not. Sometimes cases appeared to result from contact with a patient, but too frequently no traceable connection between cases could be discovered. To account for the discrepancies in the facts, the concept of "contingent contagion" was advanced--that is, the idea that under certain contingencies, which could not be defined, yellow fever might become contagious. But few considered this a satisfactory explanation.

The opponents of contagion, and they were many, had ample evidence to cite against that doctrine. Over the years many physicians had experimented with the saliva, perspiration, and even the black vomit of yellow fever patients. They had swallowed, inhaled, and inoculated

themselves with those materials and yet experienced no ill effects. A physician in Philadelphia in the early nineteenth century fed dogs and cats on black vomit for weeks, inoculated the animals and himself many times, rubbed the matter into his eyes, drank a large amount in diluted and in pure form--all without harmful result. On one occasion, a surgeon in the British Army "swallowed a wine-glass full of fresh black vomit and felt no more effect from it than if so much water had been taken into the stomach. It did not impair his appetite for dinner."⁶⁰

In further experimentation, physicians had slept in beds where yellow fever victims had recently died and also had worn the victims' supposedly infected clothing without contracting the fever.⁶¹ Theodore Clapp, Unitarian minister in New Orleans, told of a man who, during the epidemic of 1822, had slept in the same bed with a friend who was dying of yellow fever. On one occasion he had been "absolutely inundated by a copious discharge of the

⁶⁰History of the Yellow Fever in New Orleans, during the Summer of 1853, with Sketches of the Scenes of Horror which Occurred during the Epidemic . . . by a Physician of New Orleans, 38-39.

⁶¹N. O. Med. & Surg. Jour., VII (November, 1850), 362.

vomito." Even after his friend's death, the man continued to occupy the same room and enjoyed the best of health. Dr. Clapp said he knew of many other similar cases.⁶²

In 1855 in the midst of the increasing furor over contagion, René La Roche, of the College of Physicians of Philadelphia, published a fourteen-hundred page, two-volume compendium of information on yellow fever, which demonstrated, among other things, that there was more to be said against contagion than for it. His forty-five page bibliography, listing approximately a thousand items, is indicative of the voluminous quantity of writing on the disease by the mid-nineteenth century. Volume One comprises a historical sketch of yellow fever, its symptoms, pathology, complications, diagnosis, prognosis, incubation, and other medical aspects. Volume Two deals with acclimation, second attacks, predisposing factors, facts and arguments for and against contagion, contingent contagion, nature of the poison, treatment, and other related problems.⁶³

In one sense, this treatise represents a kind of

⁶²Duffy (ed.), Parson Clapp, 84.

⁶³See René La Roche, Yellow Fever, Considered in its Historical, Pathological, Etiological and Therapeutical Relations (2 vols., Philadelphia, 1855).

Summa of yellow fever philosophy up to the mid-nineteenth century. Yet it is by no means a synthesis, but perhaps more like a medical Sic et Non, quoting the various authorities and presenting facts and arguments for this side, that side, and all sides without any real attempt to reconcile the conflicts. In dealing with the contagion issue, however, La Roche devoted about ten times more pages to the facts and arguments opposing contagion than to those favoring the doctrine. He noted that the prevailing medical sentiment supported non-contagion and indicated his own inclination toward that idea. Otherwise, his encyclopedic coverage of the subject was restricted largely to a description of the many controversial opinions, theories, and conflicting evidence relating to yellow fever.

Reviewing the work of La Roche for the New Orleans Medical and Surgical Journal in January of 1856, Dr. Bennet Dowler observed that almost one-fourth of the "huge volumes" had been devoted to the contagion question. But, he felt that even this "massive logic though wrought out with the patience of Job, will not convert the contagionists against their will." Pointing out the merits of the work as well as its defects and arguing vigorously over

certain points of disagreement, Dowler was neither extremely unkind nor intensely personal like many other reviewers with particular axes to grind.⁶⁴

In a penetrating criticism of La Roche's digest of yellow fever, Dr. William Holcombe, homeopathic practitioner in New Orleans, conceded that it was probably the most extensive and valuable monograph thus far contributed to medical literature. Yet in spite of Dr. La Roche's indefatigable efforts in compiling fact and opinion, Holcombe felt that "his mind lacks the analytic, generalizing and constructive power, which is necessary for true philosophic induction." The author had simply paraded forth arguments for all theories and all sides of the issues and then assumed a "negative, conservative, indefinite amalgam of opinion" or no opinion at all. "There is nothing positive and definite in all this pile of literary lumber"; said Holcombe, "not one proposition which others have not scouted, not one affirmation which many others have not denied."⁶⁵ And he was right. But even if La Roche had

⁶⁴N. O. Med. & Surg. Jour., XII (January, 1856), 555-74.

⁶⁵William H. Holcombe, Yellow Fever and Its Homeopathic Treatment (New York, 1856), 61-65.

set out to attempt a philosophical synthesis of the countless conflicting positions and even if he had succeeded in formulating concepts to reconcile the contradictory ideas, in the absence of the germ theory and the mosquito doctrine, he could not have created an abstraction in conformity with reality.

Although he provided a gigantic reference work on yellow fever, La Roche settled no issue, ended no argument. His volumes appeared at the very time that yellow fever theories were being debated more furiously than ever and many old concepts were beginning to break down under the mass of conflicting evidence provided by the succession of epidemics in Louisiana and the South in the 1850's. Local causation came under severe attack from many quarters, and traditional views underwent gradual modification. Laymen, together with a small portion of the medical profession, began to advocate quarantine as well as sanitary measures to fight the disease. Even if yellow fever were not contagious in the commonly accepted sense of the term, a patient laboring under the disease was obviously associated in some manner with the spread of yellow fever to other persons and places. And in 1855 for the first time in thirty years, the Louisiana legislature

once again passed an act providing for quarantine and a State Board of Health.

In its report for 1856 the new Board of Health suggested that some unknown essence emanated from a patient's body and was communicated to others in a yet unknown manner. Admitting that meteorological and terrestrial causes undoubtedly acted as contributing influences, the Board felt that neither alone nor both together could produce the disease. Great quantities of evidence and testimony collected since 1853 indicated "that a material virus, originating in the body of the sick man, is also a potential means and perhaps the most so, under favorable circumstances, of all the others." But atmospheric and terrene influences must also be essential, the Board concluded, since the "morbific poison" from the patient's body, whether in the form of exhalations or transferred to fomites, did not always and invariably transmit the disease to susceptible individuals on exposure.⁶⁶

Discussing the same problem in the Report for 1857, the Board of Health observed that the prevailing opinion prior to 1853 had considered yellow fever not infectious.

⁶⁶Report of the Louisiana State Board of Health for 1856, 7-9.

But the experience of 1853, 1854, and 1855 had necessitated a reconstructed view. According to the Board's Report, "The common sense of the people, unskilled in the refinements of scientific hypotheses, solved the problem, by a process quite as logical as, and certainly far more practical than the conjectures of the learned." To the layman, a yellow fever patient was in some unknown manner a source of disease. Yellow fever, if not directly contagious, was somehow infectious and communicable. Hence, came the general sentiment in favor of quarantine. "The policy [of quarantine] was then inaugurated," the Board Report stated, "not in obedience to the judgment of the medical community, but in spite of it."⁶⁷ In this instance the popular belief in yellow fever's contagious nature overrode the opposition of the medical profession.

Although the medical profession continued to oppose the doctrine of direct contagion, with good reason, more and more physicians began to question some of the other traditionally accepted concepts. Several Louisiana physicians, writing on yellow fever theory after the epidemics of the 1850's, listed the usual contributing influences--

⁶⁷Report of the Louisiana State Board of Health for 1857, 4-5.

miasmatic poison, filth, heat, humidity, and predisposing causes--but they admitted that essentially nothing was known of yellow fever's etiology. More clearly than ever before, they realized that something basic was lacking in all previous explanations.⁶⁸

One French Louisiana physician, Dr. D. Durac, raised this important question: exactly what is a miasm? Observing that the majority of medical writers had long agreed that yellow fever resulted from miasmatic influences, he pointed out that science had not yet determined any means for analysing that mysterious something called a miasm. Perhaps the operative factor in miasmatic poison might be animalcules, he suggested, such as the ones black vomit exhibited under microscopic observation. Like Riddell, Dr. Durac felt that miasmata required further analysis. Nothing, absolutely nothing, had been settled about the yellow pestilence, he insisted, and although many causal factors had been assigned to the disease, he felt there were others yet undiscovered: "Nous dirons,

68A. J. F. Cartier, La Fièvre Jaune de la Nouvelle-Orléans (Paris, 1859), 46-47; D. Durac, De la Fièvre Jaune et des Épidémies de 1853, 1854 et 1858 dans la paroisse Lafourche (Nouvelle-Orléans, 1863), 20-24, 65-72; Deléry, Précis Historique de la Fièvre Jaune, 52, 147.

nous, que nous croyons à l'existence d'autres causes, causes cachées à l'homme jusqu'ici et que Dieu peut-être un jour dévoilera à sa créature."⁶⁹ ("We declare that we believe in the existence of other causes, causes thus far hidden to man, and which perhaps someday God will reveal to his creature.")

Disturbed by the theoretical conflicts since the 1840's, on numerous occasions Dr. Bennet Dowler had tried to keep open to further investigation a path which was rapidly becoming cluttered with a proliferation of dogmatic abstractions. He characterized the "alleged causes" of yellow fever as completely inadequate in spite of, or because of, the "hundreds of inconclusive and contradictory volumes, filled with special pleadings, diluted logic, theoretical biases, and irrelevant facts." Dr. Dowler believed it was "better to acknowledge ignorance than to advocate an error," better to leave all questions open than dogmatically to close the door to further investigation.⁷⁰

Medical philosophers generally assumed a cause without ample proof. When the effect appeared without that

⁶⁹Durac, De la Fièvre Jaune, 65, 67, 69, 24.

⁷⁰Duffy (ed.), Parson Clapp, 105.

cause they subtly substituted some closely related circumstance. When their cause existed without any accompanying effect, a counteracting contingency was assumed. Dowler compared this kind of sophistry to the story of a Frenchman who, observing that an Englishman recovered from an illness after eating a red herring, fed one to a fellow Frenchman with the same disease. When the sick Frenchman died, the would-be empiricist noted that a red herring would cure an Englishman of a fever, but the same treatment would kill a Frenchman.⁷¹

As for the epidemic constitution of the atmosphere, Dowler considered that assumption useless except as "a cloak to ignorance" and suggested that it "might as well be called an epidemic deception."⁷² The Board of Health in 1858 struck another blow against the concept of the epidemic constitution. In the opinion of the Board, sufficient evidence existed to demonstrate that yellow fever patients served as one clear means of diffusing and propagating the poison of the disease. Although many cases occurred without traceable connection either to sick

⁷¹N. O. Med. & Surg. Jour., III (September, 1846), 174.

⁷²Ibid., XII (November, 1855), 322.

persons or to fomites, the Board considered the "traditional and hackneyed solution" so long employed to account for yellow fever's irregularities--epidemic constitution of the atmosphere--a completely inadequate explanation. The Board contended that "the assigning of an unknown cause . . . [was not] a whit more rational and satisfactory, than an unqualified denial of any causation whatever for the event."⁷³

And so the disagreement and uncertainty continued. Yankee quarantine and sanitation measures in New Orleans during the Civil War, based on General Butler's yellow fever philosophy (effluvia from both animal and vegetable decomposition plus an imported "seed"), was accompanied by a period of freedom from the disease. This phenomenon provided convincing evidence to many persons that either yellow fever was an imported disease which could be screened out by strict quarantine, or that the fever was indigenous but could be prevented by thoroughgoing sanitary measures. Still nothing was settled.

In 1870 Dr. Stanford E. Chaillé remarked that a

⁷³Report of the Louisiana State Board of Health for 1858, 19-20.

considerable extension of scientific boundaries was yet required "before the wearisome discussions of doctors can confer any substantial benefits on the public." In summarizing the several theories competing for ascendancy in 1870, Dr. Chaillé listed three basic conceptions, together with a fourth representing the various possible modifications: (1) Yellow fever is both contagious and portable, spread by persons as well as fomites. (2) Yellow fever is portable but not contagious, that is, communicable by fomites but not by persons. (3) Yellow fever is neither portable nor contagious, transmitted by neither persons nor fomites, but the poison is present at times and under variable conditions in the atmosphere of certain localities. (4) Yellow fever may be produced by two different poisons, or by the same poison producing different results, depending on individual or atmospheric conditions. Therefore, at various times, the disease may be contagious or portable or both or neither.⁷⁴

Throughout the remainder of the nineteenth century confusion and controversy still characterized the field of

⁷⁴N. O. Med. & Surg. Jour., XXIII (July, 1870), 568, 597.

theory, but several significant modifications occurred. When a number of years passed in the 1880's and 1890's without a single case of yellow fever in New Orleans, it became harder to believe that the disease was indigenous. Naturally, the quarantinists took the credit for having protected the city and the state from the malady. As the germ theory gained acceptance from the 1870's onward, the position of those who would deny portability as well as contagion became less tenable, and the concepts of the spontaneous miasm and epidemic constitution gradually faded away. Although the formulation and validation of the germ theory in the second half of the nineteenth century cleared away the miasmatic and atmospheric fallacies, the basic question of how persons contracted yellow fever germs remained a mystery. Direct contagion still had more opponents than advocates, but few in the latter nineteenth century would deny the transmission of infection by germ-laden fomites. The connection between a case of fever and the specific source of infection was not always clearly discernible, but fomites provided the most plausible answer until the discovery of the insect vector.

In addition to the controversies regarding causation and transmission, another question which confounded the

theorists until the latter nineteenth century involved the very nature of yellow fever; was it a disease sui generis or was it simply one among a class of interrelated fevers? For centuries physicians had encountered diagnostic difficulties in dealing with diseases which manifested superficially similar symptoms. Some ailments, of course, exhibited marked characteristics which differentiated them from all others, such as smallpox, bubonic plague, venereal diseases, and others. Many other maladies not so readily defined included those producing high fever together with respiratory, intestinal, or nervous disorder in the system, but without characteristic skin eruptions or other clearly observable qualities to set them apart from all others.

The inherent difficulty already present in the field of diagnosis was crystallized into a methodology and provided with a theoretical basis by Dr. Benjamin Rush, the most widely known American physician of the late eighteenth and early nineteenth centuries. Dr. Rush believed that the multiplication of diseases was "as repugnant to truth in medicine, as polytheism is to truth in religion." The physician who considered every different bodily disorder as a distinct disease, according to Dr. Rush, resembled "the Indian or African savage, who considers water, dew,

ice, frost, and snow, as different essences; while the physician who considers the morbid affections of every part of the body (however diversified . . .) as derived from one cause, resembles the philosopher, who considers dew, ice, frost, and snow, as different modifications of water." To Dr. Rush, yellow fever was simply the most malignant form in the hierarchy of fevers produced by marsh miasmata. His lexicographer-epidemiologist contemporary, Noah Webster, also concluded that yellow fever was nothing more than a high grade bilious fever.⁷⁵

The idea of yellow fever as the most malignant degree of a fever which assumed many interchangeable forms prevailed throughout the first half of the nineteenth century. Writing in 1817, Dr. Jabez Heustis described yellow fever as a "more aggravated degree of intermitting and remitting fever," which represented "the grand climax of malignity, analogous in its origin and nature [to the other forms], and standing at the top of the same scale." All those fevers, he maintained, were only modifications of the same basic disease, differing only in degree of force. Furthermore, the forms were interchangeable; one type could

⁷⁵Winslow, Conquest of Epidemic Disease, 200, 214.

develop into another or assume another form during an epidemic. Any observer who had ever witnessed this phenomenon and yet doubted the identity of fevers, said Dr. Heustis, "must be a skeptic in physics, and a disbeliever in the demonstrative evidence of his own senses."⁷⁶

It was generally believed by both laymen and physicians that during the course of an epidemic all forms of fever tended to merge into the most malignant grade and assume the form of yellow fever.⁷⁷ By the 1840's some persons had concluded that yellow fever was a specific entity, separate and distinct from all other fevers,⁷⁸ but the opposite opinion prevailed until the middle of the century.

In 1844 Dr. P. A. Lambert of New Orleans undertook the task of classifying the forms of yellow fever epidemics as well as the various types of yellow fever. Forms of epidemics, he said, included inflammatory, bilious, bilious inflammatory, mucous, putrid, and nervous, depending on the dominant symptoms characterizing the fever

⁷⁶Heustis, Physical Observations, 114.

⁷⁷Picayune, August 21, 1841.

⁷⁸New Orleans Medical Journal, I (October, 1844), 219.

during an epidemic. As types of yellow fever, Dr. Lambert listed continued, remittent, and intermittent, categories based on the pattern of fever activity in an individual. He announced that it was not his intention to devise "an algebraic formula" for the solution of problems regarding the theory of types since the variations were too subtle to allow for precision.⁷⁹

Dr. Erasmus Darwin Fenner was among the outstanding exponents and defenders of the philosophy of interrelated fevers. Reflecting this view, he wrote, "the terms of bilious remittent, yellow and typhus, applied to the fevers seen in New Orleans, in the months of August and September, more properly designate certain conditions of the system produced by a common cause, or rather, certain stages of some general disease, than they do the existence of diseases altogether separate and distinct. . . ." In one case he had witnessed all the various types of fever exhibited in one individual during one illness.⁸⁰

Dr. Fenner disagreed with Rush and others who had classified yellow fever as the highest grade of bilious

⁷⁹Ibid., I (July, 1844), 7-11, 23-24.

⁸⁰N. O. Med. & Surg. Jour., VI (July, 1849), 48.

fever, for he had observed occasions when ordinary bilious fever displayed an even more malignant quality than yellow fever without exhibiting the hemorrhagic tendency which characterized the yellow form. To attribute the varied forms of fever to modifications of one basic cause was, in his opinion, "certainly a more rational supposition than to attribute the various types of concomitant fever to the simultaneous action of separate distinct and specific causes."⁸¹ Addressing himself to those who considered yellow fever a distinct disease, Fenner asked, "If you maintain that one of these types (yellow fever) is a disease sui generis, why not contend for the same in respect to intermittent, typhus, typhoid, remittent, bilious, congestive, malignant, pernicious, ephemeral, continued, gastric and solar fever . . . ?"⁸²

In the Sanitary Commission Report on the epidemic of 1853, Dr. Edward H. Barton stated that bilious, intermittent, and yellow fevers had been observed to "run into each other" and that the blending of symptoms had occurred

⁸¹Erasmus Darwin Fenner (ed.), Southern Medical Reports (2 vols., New Orleans, 1849-1850), I, 111-13.

⁸²Ibid., II, 85.

frequently in the same individual. Many cases began with the symptoms of intermittent or remittent fever, he declared, and ultimately assumed the yellow fever form and terminated in black vomit and hemorrhagic activity. Other cases which early exhibited the signs of yellow fever terminated favorably as intermittent fever. Barton attributed the convertibility of fevers to the varying concentration of the same basic cause as well as the differing degrees of individual susceptibility. The epidemic of 1853 had settled once and for all, as far as he was concerned, the disputed question of the identity of bilious and yellow fever.⁸³

The issue might have been settled for Dr. Barton, but it was by no means settled for all others. Several medical men writing in the 1850's indicated a belief in yellow fever's separate and distinct nature. Dr. A. J. F. Cartier, in a study of yellow fever in New Orleans, called attention to what he considered certain fundamental differences between yellow fever and the intermittent fevers: Yellow fever conferred lasting immunity after one attack;

⁸³Barton, Cause and Prevention of Yellow Fever, 113-14.

the others did not. Although it seemed that the diseases sometimes intermingled, yellow fever always disappeared as winter approached, while the other fevers did not seem to be so clearly affected by the season. Yellow fever exhibited a different pattern of chills and fever, a continued type rather than intermittent. It was clearly evident to Cartier that yellow fever was distinguished from all other fevers by its own essential characteristics, including yellowness, passive hemorrhage, and black vomit, symptoms not occurring together in any other fever known.⁸⁴

Others in the 1850's who argued that yellow fever constituted a specific disease with a specific cause, separate from all the others, were Drs. T. A. Cooke of Washington, Louisiana,⁸⁵ W. J. Tuck of Memphis,⁸⁶ and James Jones of New Orleans.⁸⁷ Dr. Cooke maintained that "the time is approaching when many diseases now assembled into one group or family, considered mere modifications of

⁸⁴Cartier, La Fièvre Jaune de la Nouvelle-Orléans, 2-5.

⁸⁵N. O. Med. & Surg. Jour., X (March, 1854), 625.

⁸⁶Ibid., XI (September, 1854), 175-84.

⁸⁷Ibid., XV (July, 1858), 500-17.

a type, having a presumed identity of causes and similarity if not identity of nature, will take separate and distinct places in nosology."⁸⁸ In foreseeing the ultimate breakdown of symptom-complexes into distinct diseases with specific causes, Dr. Cooke was in the stream of modern medical science.

From the mid-nineteenth century onward, as medical science advanced with every-increasing rapidity, the approach to an investigation of yellow fever became more methodical, quantitative, technical, and concrete--less argumentative, dogmatic, speculative, and abstract. Instead of wandering through the maze of nebulous concepts and loose generalizations, some medical thinkers began to delve into the particulars.

For example, Dr. Joseph Jones undertook a number of painstaking post-mortem examinations of yellow fever victims in Charity Hospital in the early 1870's. With the aid of the microscope, he made intensive studies of the blood, black vomit, urine, heart, brains, lungs, liver, spleen, and kidneys of the patients who died. He filled a research notebook with close descriptions of the cases, their

⁸⁸Ibid., X (March, 1854), 625.

symptoms, comparative results of autopsies, and urinalyses, as well as drawings of the various organ tissues under microscopic view.⁸⁹

Dr. Jones felt that a systematic investigation of this nature was necessary to extend the boundaries of knowledge relating to "this terrible scourge of tropical and sub-tropical America." Not until crude observations and hasty generalizations had been replaced by careful, accurate, quantitative and comparative analysis could yellow fever's effects on the various organs of the body be understood. Realizing the importance of this kind of research, Jones set out on the path of scientific investigation and inquiry which was attracting more and more interest and attention in the latter nineteenth century.⁹⁰ From his study of specific pathological features, he concluded that yellow fever "differs essentially from the different forms of Malarial fever. . . ."⁹¹ Since the

⁸⁹"Yellow Fever Research Notebook, 1870-1872," Joseph Jones Papers (Louisiana State University Archives, Baton Rouge); N. O. Med. & Surg. Jour., New Series, IV (September, 1876), 159-165.

⁹⁰"Composition and Character of the Urine in Yellow-Fever," Joseph Jones Papers.

⁹¹"Yellow Fever Research Notebook, 1870-1872," Joseph Jones Papers, 5-6.

diagnostic confusion of fevers resulted mainly from the similarity of superficial symptoms, a probing beneath the surface disclosed certain positive symptomatic differences and thereby provided a basis for differentiating one disease from another.

Another Louisiana physician, Jean Charles Faget, investigated the specific action of yellow fever in relation to the patient's pulse and temperature, and in the early 1870's set forth the principle which came to be known as "Faget's Law." That principle is still cited today in modern medical works as a basic diagnostic sign of the disease. In the New Orleans epidemic of 1870 and the Memphis epidemic of 1873, Dr. Faget studied the behavior of the pulse and temperature in a great number of cases and found that the pulse rate did not speed up with the ascent of the temperature, as in other fevers, but instead gradually fell as the temperature rose. This phenomenon, he contended, was one of the best diagnostic signs for detecting yellow fever in its early stages. Faget also argued that this peculiar sign demonstrated the specific nature of yellow fever as a disease separate and distinct from all

other fevers.⁹² Other observers had noticed the divergence between the pulse rate and the temperature (that is, the falling pulse in conjunction with the rising fever),⁹³ but until Faget no one had systematically charted the relation between the two indications or formulated a clear principle to be followed in diagnosis and prognosis. His work represents a forward leap in scientific observation as well as a lasting contribution to medical theory and practice. Faget's distinguishing principle also provided convincing evidence in favor of the specificity of yellow fever.

In 1878 the members of the Orleans Parish Medical Society voted on several long disputed questions regarding the yellow pestilence. Although no unanimity existed on any one position, the majority agreed that yellow fever was a specific disease caused by a microorganism and hence

⁹²Jean Charles Faget, Monographie sur le Type et la Spécificité de la Fièvre Jaune, Établis avec l'Aide de la Montre et du Thermomètre (Nouvelle-Orléans, 1875); N. O. Med. & Surg. Jour., New Series, I (September, 1873), 145-68.

⁹³Durac, De la Fièvre Jaune, 65; Cartier, La Fièvre Jaune de la Nouvelle-Orléans, 7; N. O. Med. & Surg. Jour., LI (July, 1898), 56.

not interchangeable with any other fevers.⁹⁴ As the germ theory became more and more widely accepted, the abandonment of the monistic theory of fevers followed as a natural corollary. Nevertheless, there were always some who lagged behind. In an address before the New Orleans Academy of Sciences in December of 1879, Dr. U. R. Milner paraded forth all the traditional conceptions of yellow fever's nature, causation, and transmission. Neither imported nor contagious, the fever was indigenous to the area, he insisted, and spread by "infectious gases" generated from animal and vegetable effluvia. Further, Dr. Milner asserted, "The true yellow fever is the topmost grade in a regular ascension from the simplest intermittent. . . ."⁹⁵

Not until yellow fever had been banished from the land by the great crusade of 1905 and by other preventive

⁹⁴N. O. Med. & Surg. Jour., New Series, VI (September, 1878), 240-55.

⁹⁵U. R. Milner, Yellow Fever, not imported, nor Contagious, but Indigenous, and Intrinsically Identical with our Paludal Fevers. Preventable by Well Determined and Wisely Executed Local Sanitary Measures. Quarantine a Wide-spread Calamity and Should no longer be Tolerated. A Lecture before the Academy of Sciences of New Orleans . . . 1879 (Miscellaneous Publications on Yellow Fever in Louisiana and Adjoining States, Howard-Tilton Memorial Library, New Orleans), 3-18, 22, 26.

measures based on the mosquito doctrine, not until then was there anything resembling universal agreement on the nature, causation, and transmission of what was probably the most controversial disease in all medical history.

CHAPTER VIII

THEORY AND CONTROVERSY: SUSCEPTIBILITY, ACCLIMATION, AND IMMUNITY

As if the questions regarding yellow fever's nature, causation, and transmission were not enough to confound and perplex the truthseekers from the late eighteenth century until the early twentieth century, several other issues arose in connection with the activity of that seemingly unpredictable disease. Why did certain persons and groups exhibit greater and lesser degrees of susceptibility to yellow fever than others? Did acclimation, that is, becoming accustomed to the climate of the extreme South, carry with it immunity to the Saffron Scourge? Or could immunity be acquired only by living through an attack of the disease? What roles did age, race, sex, nationality, or economic class play in determining degrees of susceptibility? As usual, with so many variables and unknowns involved in the problem, it was exceedingly difficult to settle upon one precise equation which would invariably account for all the facts.

Beginning with the first recorded yellow fever epidemic in New Orleans in 1796, observers noticed the obvious preference of the disease for newcomers to the area. In the many epidemics which followed, the Creole (that is, native) inhabitants as well as those persons who had resided in New Orleans for a number of years always seemed less liable to attack, while the strangers were repeatedly swept off in great numbers. Both Baron Joseph Xavier Pontalba and Governor William C. C. Claiborne in writing about the early epidemics in New Orleans continually reiterated the extraordinary susceptibility of strangers to the disease. Undoubtedly, the tendency of the time to relate climate and disease, together with the obvious susceptibility of persons recently having moved from a cooler climate into the subtropical heat and humidity of New Orleans, led to the belief that the "unacclimated stranger" was more prone to yellow fever attack than the native or the acclimated simply because he was not yet accustomed to the climate.

In discussing the scourge of New Orleans, Berquin-Duvallon, French traveler in Louisiana in 1802, observed that among the inhabitants of New Orleans the Americans were yellow fever's principal objects of attack, while

the French were less susceptible and the Spanish almost not at all. He noted that the Spaniard was accustomed already to a warm climate, but the American, coming from a colder climate, had his veins "copiously" filled with blood and therefore suffered from the intense heat which rendered him more "susceptible of inflammation and corruption." Furthermore, Berquin-Duvallon asserted that the Spaniard lived a more temperate existence than the American who "revels on succulent meats, and spices, and has often the bottle or glass to his mouth." These reasons, he believed, would go far in determining why the disease proved so fatal to Americans, only slightly disturbed the French, and gave the Spanish almost no trouble at all.¹

After the purchase of Louisiana by the United States in 1803, more and more Americans poured into the Crescent City; and as yellow fever paid its annual visits and periodically raged in epidemic form, the recently arrived Americans continued to furnish the great preponderance of victims. In 1817 Dr. Jabez Heustis, like Berquin-Duvallon, noted that yellow fever occurred more frequently

¹Berquin-Duvallon, Travels, 116.

among the Americans than among the French. To account for this phenomenon, he emphasized the difference in their attitudes toward temperance and sobriety. While the French drank wine, the American consumed great quantities of distilled spirits, on the incorrect assumption, said Heustis, that hard liquor was necessary "to preserve them against the fogs, damps, and sickly vapours of the climate." Dr. Heustis also attributed American susceptibility to their excessive use of animal food, especially when it was likely to be in a partially spoiled condition.²

As the population of New Orleans became increasingly American in the first few decades of the nineteenth century and as the tide of European immigration began to flow into the population, yellow fever continued to exhibit a marked tendency to attack those persons, whether American or European, who had only recently arrived in New Orleans. Sometimes yellow fever was even called the stranger's disease or the acclimating disease, and the term acclimation itself acquired a rather ambiguous meaning. Apparently, a person might be considered acclimated if he were a native or long-resident New Orleanian,

²Heustis, Physical Observations, 113.

supposedly adjusted to the climate without ever having experienced an attack of the disease; or one might become acclimated by surviving a case of yellow fever.

Summarizing current opinion on susceptibility, acclimation, and immunity to yellow fever in the 1840's, Dr. John Harrison, Professor of Physiology and Pathology in the Medical College of Louisiana, stated that yellow fever attacked "only strangers, those born in the city being perfectly exempt from the disease, though it is still a question whether they do not pass through it in infancy." Creoles living outside New Orleans and unaccustomed to the disease, he declared, were as liable to attack as Northerners or Europeans when coming into an area where yellow fever prevailed. On the other hand, persons coming to New Orleans from localities where yellow fever was common seemed to enjoy immunity. Those who lived through a violent epidemic without contracting the disease were considered "fully acclimated," but, he asserted, passing through a mild epidemic without being affected was no guarantee of immunity. And persons recovering from a case of fever were said to be acclimated, that is, immune to further attack; however, he maintained that even such immunity acquired through an attack was not always

positive since second attacks, although rare, had been known to occur.³ Dr. Harrison also pointed out that yellow fever in Negroes and in children was ordinarily mild and seldom fatal.⁴

Although the explanations advanced by different physicians to account for the observed phenomena were often contradictory, the broad outlines of susceptibility and immunity were fairly clear and largely agreed upon by both physicians and laymen in nineteenth-century New Orleans. Nevertheless, there were always exceptions to the general rules. In the absence of certainty, it was necessary to fall back on degrees of probability. A stranger from the North or from Europe might reasonably fear for his life; a native or long-resident New Orleanian who had not, to his knowledge, experienced the disease, but who had lived through several yellow fever epidemics, might feel relatively safe; but the most secure individual of all was the person who had passed successfully through an attack of

³Actually, the idea of second attacks was only a product of mistaken diagnosis; in one of the two supposed cases a physician had confused some other fever with the yellow pestilence, because one case of true yellow fever confers life-long immunity.

⁴N. O. Med. & Surg. Jour., II (September, 1845), 130.

the disease.

Characterizing the confident, self-assured "acclimated man" in the midst of the dreadful epidemic of 1853, the editor of the New Orleans Weekly Delta declared: "You can tell this man the moment you see him. He walks along the street with a tremendously bold swagger." Unaffected by the offensive odors from the filthy streets and gutters, that brave individual "turns up his nose at nothing but the unacclimated man . . . [who goes about] timidly and nervously recounting the mortality of the previous twenty-four hours." To the acclimated fellow, yellow fever was a "mere nothing"; in fact, it was "rather a pleasure to have it than not, it results in such a splendid appetite when you get over it."⁵ Undoubtedly, the confidence which came from acclimation, in the sense of immunity, helps to explain the New Orleanian's tendency to discount the severity of epidemics and to insist that New Orleans was not really an unhealthy city.

Seemingly, many persons believed that a case of yellow fever, if one lived through it, conferred certain praiseworthy advantages. In July of 1853 Clarissa Town

⁵New Orleans Weekly Delta, August 7, 1853.

of West Baton Rouge Parish wrote in her diary that although there were many cases of yellow fever in New Orleans, "It is not as much feared in the City as Congestive Typhus, or shipfever, for it only requires gentle medicines and good care, when taken in time to insure recovery, and then the system is invigorated by it and the health is usually better after than before."⁶ A member of the New Orleans Howard Association in 1853 also maintained that a yellow fever patient, if cured of the disease, then enjoyed "immunity not only from all fevers, but from the rheumatisms and complaints generally of the nervous system." Believing this principle confirmed by his years of observation, he comforted a sick friend with the thought that "a successful issue was a safeguard against all other ills indigenous to a southern latitude."⁷ Unfortunately, over 8,000 persons in the New Orleans epidemic of 1853 did not survive to enjoy those supposed benefits of good health and an invigorated system.

⁶Clarissa E. Leavitt Town, *Diary* (Louisiana State University Archives, Baton Rouge), July 21, 1853, p. 202.

⁷Robinson, *Diary of a Samaritan*, 61, 88; see also *New Orleans Weekly Delta*, July 24, 1853.

Persons coming to the Crescent City to live must have looked forward with some measure of dread to the "acclimating fever," yet at the same time they hoped that they might have an attack, recover, and settle the matter once and for all. A young man in New Orleans wrote his Philadelphia cousin in September of 1847, "It is with great pleasure that I am able to tell you with certainty, that both [brother] Dick & I are acclimated." The epidemic had been severe that summer, he remarked, and "I knew that we were running some risk by remaining here during the sickly season, but as we expect to reside here altogether, it was much better to get through with it at once. . . ." Further, he mentioned that they had not been extremely fearful of death from the disease, since yellow fever when treated in time was not as deadly as many believed. Already weakened by a previous attack of "the Chills & Fever" (malaria), his brother had "a very hard time of it," but "My attack was just sufficient to answer all purposes of Acclimation," he said, and "I feel strong as ever."⁸

⁸Isaac H. Charles to John Edward Siddall, September 18, 1847, Isaac H. Charles Letters (Louisiana State University Archives, Baton Rouge).

This letter must have provoked a sharp response from the cousin in Philadelphia regarding the subject of health in New Orleans, for young Isaac Charles, the newly acclimated New Orleanian, felt it necessary in his next letter northward to defend his adopted city with as much patriotism as any native. "As for our Fevers Ned, I must beg of you to speak of them in a more respectful manner. You seem to place your 'City of Brotherly love,' against or rather before, our beloved 'Crescent,' as regards health--But there I think you are wrong," he contended. Actually, the Philadelphian was right; New Orleans suffered an annual mortality rate far above that in the City of Brotherly Love. Nevertheless, Isaac Charles, like all good New Orleanians, proceeded to set forth the usual pattern of argument. Within a six-year period, he declared, from 1842 to 1847, only one yellow fever epidemic had occurred, and he believed the total mortality for that six-year period in New Orleans was probably no greater than that in Philadelphia during the same time. Furthermore, New Orleans suffered a sickly season only about once every six or seven years; "And besides--the Yellow Fever is not so terrible a disease after all." At this point, young Charles introduced a line of defense which recurs

throughout the period of yellow fever's prevalence in Louisiana, a notion involving some degree of class consciousness. He admitted that the disease carried off great numbers of persons, "but by far the greater part of the victims are the Irish & the Dutch, who have just arrived from a country where the Climate is totally different to ours -- And if you could accompany me thro' some parts of this place," he continued, "& see the miserable, filthy, loathsome manner in which the lower orders live, you would not be at all surprised, that when a fever once broke out, that it should spread & become as malignant as it does here." He then described a portion of the city with its "long ranges of one story frame houses" which gave off such a "stench" that one could hardly stand to walk near the area. This section of New Orleans, he declared, was crowded with "the lower order of men, women & children--a set of rumdrinking, fighting people." After closing his letter, the snobbish young New Orleanian decided to write an additional page describing the better aspects of the city such as the areas "inhabited by very respectable people."⁹ This inclination to blame the high mortality

⁹Ibid., November 18, 1847.

rate from yellow fever in New Orleans on the lower orders of society, particularly the recently arrived European immigrants, was a typical theme in the writings of many observers.

Some New Orleanians seem to have considered epidemics as providential instruments for keeping down the numbers of undesirables in the population. In a discussion calling attention to the pressing need for sanitary reform in the Creseent City, the editor of the New Orleans Medical and Surgical Journal in 1845 declared that he was "aware of the opinions of some narrow-minded and selfish individuals, that our city is already too healthy, and that nothing but frequent and severe epidemics can keep off the million who are eager to come here, and who, they say, would divide and fritter away the business of the place until it would be worth nothing to any one." Nevertheless, the editor did not believe these opinions were held by "the liberal and philanthropic members of the medical profession, nor, we trust of our enlightened councilmen." On the contrary, he suggested that business and prosperity would grow with an increasing population.¹⁰

¹⁰N. O. Med. & Surg. Jour., II (November, 1845), 397-98.

Those who favored the periodic occurrence of epidemics to clear away a portion of the unwelcome strangers and lower classes probably constituted a very small minority in New Orleans. But almost every commentator on yellow fever, whether a newspaper editor, a physician, or a layman writing a letter, associated the origin and prevalence of the disease and its most fatal effects with the lower orders of society and their filthy living habits. Even when the disease leaped across the socio-economic boundaries and attacked members of all classes, the chances for recovery seemed to increase in proportion to one's status. One observer of the epidemic of 1847 wrote, "It [yellow fever] attacks indiscriminately but proves fatal to but few except the dissipated and filthy -- Nine tenths of the funerals that have been seen by the writer within a fortnight were Irish. These die as a matter of course."¹¹

Dr. Erasmus Darwin Fenner pointed out that the poor classes suffered more than others, not only from yellow fever, but from all kinds of fevers. In a superior tone reflecting the attitude of his social order, Dr. Fenner

¹¹Bartlett for Smith & Bro. to T. Smith & Co., August 12, 1847, T. Smith and Company Papers (Louisiana State University Archives, Baton Rouge).

declared, "No one aware of the stupid imprudence and negligence of the laboring classes can be surprised at the mortality amongst them. They receive high wages for their labour, and having no idea of economy, it too often causes their ruin." On the other hand, the better classes in the city, according to Fenner, suffered only slightly from any kind of fever.¹²

After a limited outbreak of yellow fever in 1849, the editor of the New Orleans Medical and Surgical Journal noted that the disease that season had been "confined almost exclusively to the laboring and lower class of the community." Few in the upper "walks of life" who attended to the usual "hygienic precautions" suffered an attack. Did the difference in living habits account for "this preference of the disease for a particular class of persons?" the editor asked. Believing this to be the case, he suggested that if the social and moral condition of the lower class could be "ameliorated and raised to a level with the better class of our citizens, the yellow fever would seldom visit our city." As additional evidence for his argument, the editor observed that even among the unacclimated

¹²N. O. Med. & Surg. Jour., V(July, 1848), 52-53.

strangers having recently arrived in the city, the "respectable portion" of that group had been relatively untouched by the disease.¹³

Defending New Orleans against the charge of insalubrity, one New Orleans physician, Dr. J. S. McFarlane, became rather vehement in blaming the situation on the strangers. Except during epidemic seasons, which did not affect the residents at all, he claimed, New Orleans enjoyed unusually good health. Not only were the strangers responsible for New Orleans' reputation for bad health, but also its reputation for immorality. "Every evil with which we have to contend," declared Dr. McFarlane, "is introduced by strangers. Go and survey the seats of impurity, -- who are their conductors? who their occupants? who their supporters, and who their frequenters? Strangers; who periodically visit this city." It was the "floating population," the temporary residents, that he blamed for swelling the lists of crime and disease in the Crescent City and for causing the smear on the city's good name. Dr. McFarlane felt it was high time that New Orleanians "fix the charge of vice and insalubrity

¹³Ibid., VI (November, 1849), 407-409.

where it properly belongs--on those who, coming temporarily among us . . . indulge . . . in every evil propensity and passion, until they are overtaken by those retributive diseases which have been ordained as the punishment of vice and immorality."¹⁴ Whether he came with the intention of residing temporarily or permanently, whether his filthy living habits and his intemperance provoked the fever by natural law, or his ungodliness and immorality brought down divine retribution upon his head, the stranger, the newcomer to New Orleans, most frequently received the blame for the high mortality and severe epidemics which blackened the city's reputation.

Richard Shryock in Medicine and Society has noted that the public reaction to any disease varies according to the nature of the disease as well as the class of persons most generally affected. Those ailments mainly affecting the poor, particularly the endemic diseases, were largely taken for granted and aroused little public concern. But, according to Shryock, an epidemic disease like yellow fever which spread in a mysterious manner with terrible and fatal effects, and which affected the upper classes as

¹⁴M¹Farlane, A Review of the Yellow Fever, viii.

well as the lower, and whites even more than Negroes, was certain to create a strong public reaction.¹⁵ In areas where yellow fever was not an annual occurrence, the disease was particularly terrifying and caused a great uproar among all classes whenever it did strike. New Orleans, however, represents an exceptional situation. For many years in that city yellow fever was so common an occurrence that it was taken for granted. Furthermore, circumstances provided some basis for the view that it was a disease of the lower classes.

While yellow fever never became fully endemic because of the winter season which temporarily curtailed the activity of the yellow fever mosquito and broke the chain of causation, for over a half-century the disease seems to have been re-introduced every single year, so that it became the next thing to an endemic malady. Under these circumstances the children of New Orleans had ample opportunity to contract a case of the fever and recover from the mild unrecognized attack with lifetime protection of full immunity. Hence, in the Crescent City yellow

¹⁵Richard Harrison Shryock, Medicine and Society in America, 1660-1860 (New York, 1960), 93-94.

fever did not present the same pattern of indiscriminate activity that it did in areas where it was less common, and native or long-resident New Orleanians always enjoyed a noticeable exemption from the disease which mowed down the newcomers.

As yellow fever almost always raged first in the slum areas along the waterfront after its introduction in the shipping, it seemed logical to relate that disease to the unhygienic living conditions of the lower classes living in those run-down areas. Sometimes the pestilence crossed the social boundaries and spread among the well-to-do; but even when this situation developed, the fever seemed less severe among the upper strata of society, undoubtedly because the wealthier patients sought medical attention immediately and obtained the best possible nursing care, while the daily laborers forced themselves to continue the business of earning a living until it was often too late for any treatment to suffice.

At any rate, the well-established New Orleanian, generally confident of his immunity to the yellow pestilence, tended to dismiss the scourge of New Orleans as the disease of strangers and the laboring classes. This attitude probably accounts for the years of disinterest in

preventive measures. In the latter half of the nineteenth century when the Crescent City enjoyed a number of years of complete exemption from the disease and the pestilence became a less familiar phenomenon, the native born individual, having missed the opportunity to acquire immunity through a mild case in childhood, found himself in young adulthood as susceptible as the immigrant. Then the New Orleanian began to take more cognizance of the disease which was discovered after all to be no respecter of persons.

That New Orleans Creoles exhibited an apparent immunity to yellow fever was a clearly observed phenomenon; why they did so was not a matter of certainty. In the 1850's and 1860's the question of Creole immunity flared into a full-fledged controversy. Before the epidemic of 1853 the New Orleans medical profession almost unanimously believed that persons born in New Orleans and gradually acclimated to the meteorological influences were not liable to yellow fever. But a few medical men had come to believe that Creole children did experience the disease in cases so mild as to escape diagnosis.

During the epidemic of 1858 the editor of the New Orleans Medical News and Hospital Gazette declared that

the idea of Creole exemption from yellow fever was a fallacious notion which should have been set aside after the considerable number of cases and deaths among Creoles in 1853. But that doctrine was still generally accepted, he observed; and although Creole children were dying daily of fever exhibiting yellowness, black vomit, and the other obvious symptoms of the disease during the epidemic of 1858, the malady among those children was called pernicious fever simply because of the firm belief that Creoles could not have yellow fever.¹⁶

That epidemic disease among Creole children in 1858 set off a lively discussion among the French physicians in New Orleans, with Dr. Charles Faget and Dr. Charles Deléry representing the two opposing views. Dr. Faget insisted that both Creoles and Negroes were immune to yellow fever and that the fever among them, sometimes incorrectly diagnosed as yellow fever, was actually "fièvre paludéenne." On the other hand, Dr. Deléry contended that neither Creoles nor Negroes were ipso facto exempt from the disease. The discussion of the issue grew

¹⁶N. O. Med. News & Hosp. Gaz., V (October, 1858), 553.

more and more heated in tone, with physicians throughout the city joining one side or the other and writing spirited articles in the medical journals and the newspapers. Eventually, the personal element in the debate between the leading contenders became so intense that Deléry challenged Faget to a duel. Declaring himself a Christian, Faget refused to accept the challenge. If the average man had turned down a fight to the finish on such grounds, he might have been considered a coward, but not Dr. Faget, who was noted for being religious to the point of fanaticism.¹⁷

Still the controversy persisted. After the epidemic of 1867, the next severe visitation after that of 1858, Dr. Deléry wrote a book with the intention of destroying the prejudice in favor of Creole immunity. His opposition to the traditional view in 1858 had only been reinforced by further observations. Explaining how the tradition had begun, he pointed out that time after time in epidemics, while strangers had borne the chief burden of the pestilence, attacks among Creoles had been exceedingly rare. Finally, the conclusion had been drawn that

¹⁷Edward Larocque Tinker, Pen, Pills, and Pistols, A Louisiana Chronicle (New York, 1934), 7.

Creoles were immune. Therefore, when a disease resembling yellow fever occurred in Creole children, it was called malignant, putrid, or ataxic fever--anything else but yellow fever. The tradition had long been sustained by prejudice, he contended, a powerful prejudice which made of the Creole families a privileged class. And, he understood why it was extremely difficult to destroy a belief so dear to those among the supposedly privileged class. But Dr. Deléry described a number of cases, carefully bolstered his argument with irrefutable facts, and once again concluded that, contrary to the opinion of Dr. Faget, yellow fever did occur among Creole children.¹⁸

In 1880 Dr. Stanford Chaillé wrote an article for the New Orleans Medical and Surgical Journal in which he discussed the problem of Creole immunity, and with additional evidence obtained in Cuba, argued that yellow fever attacked native born children as well as newcomers in an area where the disease occurred endemically or regularly. By 1880 this view was generally accepted by

¹⁸François Charles Deléry, Memoire sur l'Épidémie de Fièvre Jaune, qui a Regné à la Nouvelle-Orléans et dans les Campagnes pendant l'Année 1867 (Nouvelle-Orléans, 1867), iii-iv, 7-10, 94.

the medical profession in New Orleans, except for Drs. Charles Faget and Armand Mercier who still clung to the traditional belief in Creole immunity by virtue of birth. Chaillé explained the change of opinion in this manner: ". . . until 1858, New Orleans was ravaged by almost biennial epidemics, while since 1858 there have been only two serious invasions, in 1867 and 1878. The longer the intervals between epidemics, the larger necessarily must be the number of those who have failed to acquire immunity, and the more glaring becomes their liability to the disease." Wherever the fever occurred only occasionally, the Creoles seemed as open to attack as anyone else; but where the fever occurred regularly, Creole adults seemed generally exempt from the disease, obviously because they had acquired immunity by mild attacks in childhood. In conclusion, Dr. Chaillé rejected once and for all the old notion that becoming accustomed to the climate conferred any degree of immunity. He felt it was "an abuse of language" to refer to yellow fever immunity as acclimation --two different things altogether.¹⁹

Another question relating to susceptibility arose

¹⁹N. O. Med. & Surg. Jour., New Series, VIII (August, 1880), 11, 114, 122.

in regard to the noticeable preponderance of yellow fever deaths among men over those among women. Naturally, these circumstances led some to believe that women possessed a kind of inherent resistance to yellow fever simply on the basis of sex. One explanation suggested that while women were confined largely to their homes, men by their daily occupations were exposed to the harsh elements of the weather and to more numerous opportunities for contracting the yellow fever poison as they circulated about the city and experienced daily contacts with a variety of persons. Furthermore, it was postulated that men were more susceptible to the fever than women because they were universally more reckless and intemperate in their living habits.²⁰

In the 1850's Dr. Elisha Bartlett in his History of the Diagnosis and Treatment of the Fevers of the United States noted that yellow fever destroyed more males than females, but felt that further investigation was required before one could state definitely that the sexes really possessed a different degree of susceptibility. That more men than women died in yellow fever epidemics proved

²⁰Picayune, September 9, 1867.

nothing regarding a partial immunity of females, he contended, since the number of males exposed to the disease was always greater than females. The major portion of the mortality always occurred among the stranger population in a city, and among immigrants, men always greatly outnumbered women. And although the incidence of male deaths from yellow fever in the port cities exceeded the female mortality, in several large inland cities, away from the coast and with fewer strangers and sailors, the female fatalities from yellow fever had at times been the greater. Bartlett did not deny absolutely that women were by nature less susceptible to the disease; he merely wanted to indicate that mortality figures alone could not warrant such a conclusion.²¹ By 1880, on the basis of his research, Dr. Chaillé had concluded that what seemed to be a lesser degree of susceptibility among women might well be explained by the circumstances of exposure, and that the supposed resistance of females was thus more apparent than real.²²

Throughout the history of yellow fever the question

²¹Elisha Bartlett, The History, Diagnosis, and Treatment of the Fevers of the United States (4th ed., Philadelphia, 1856), 509.

²²N. O. Med. & Surg. Jour., New Series, VIII (August, 1880), 101-36.

of the Negro's reaction to the disease has perplexed the medical profession. The contrast between yellow fever's activity in the white and Negro races was so great that for the first half of the nineteenth century, many believed that Negroes enjoyed an almost complete immunity from the disease. From time to time, however, exceptions occurred and Negroes did contract observable cases of the fever, but its effects were almost always exceedingly mild. Dr. Erasmus Darwin Fenner in writing of the epidemic of 1853 stated, "It is a well established fact that there is some thing in the negro constitution which affords him protection against the worst effects of Yellow Fever; but what it is I am unable to say." He observed that the Negro came down with the fever as readily as the white man, but its action was seldom fatal. Fenner believed that "the least mixture of the white race with the black seems to increase the liability of the latter to the dangers of Yellow Fever; and the danger is in proportion to the amount of white blood in the mixture."²³

In 1853 Dr. Samuel A. Cartwright, exponent of a specialized medical practice designed for the peculiarities

²³Fenner, Epidemic Yellow Fever, 56.

of the Negro constitution, advanced a rather strange theory regarding yellow fever in relation to the white and Negro races. Classifying the yellow pestilence as a form of tropical typhus, he was convinced that it resulted from the violation of nature's laws. "Nature scorns to see the aristocracy of the white skin--the only kind known to American institutions--reduced to drudgery work under a Southern sun, and has issued her fiat," Dr. Cartwright contended, "that here at least, whether of Celtic or Teutonic origin they shall not be hewers of wood or drawers of water, or wallow in the sloughs of intemperance, under pain of three fourths of their number being cut off." Furthermore, he insisted, "Until this immutable law, which has made the white race rulers . . . be properly respected, the deaths arising from its violation will continue to swell the bills of mortality, and to lead the world into the error that New Orleans is a most sickly location." Who were the prime sufferers from yellow fever? None other than Northern emigrants, said Cartwright, who fell prey to an artificial complaint of their own creation. They produced the disease by their intemperate living habits and their "drudgery" labor in the hot summer sun. The annual cases of yellow fever in the Crescent City,

Cartwright claimed, occurred for the most part among those "unacclimated persons who attempt to jostle the negro from his stool, and to take from him those outdoor, laborious employments in the sun, wisely given to him as a precious inheritance to lift him up from brutish barbarism upon the platform of civilization, by forcing him to expand his lungs and oxygenate his blood."²⁴

When in 1853 the New York Tribune suggested that yellow fever was a consequence of slavery, introduced from Africa by the slave trade, and continually tormenting those areas where slavery prevailed, the New Orleans Weekly Delta, in a Cartwrightian vein, countered with the medical pro-slavery argument and pointed to the extraordinary exemption of the Negro from the disease. Considering the tremendous death rate among the white laboring classes, the editor wondered at the disastrous results which might be expected if slave labor were completely replaced by members of the white race.²⁵

In August of 1853 the Delta had published an article signed "Tuckahoe," which might have been written by Dr.

²⁴N. O. Med. & Surg. Jour., X (November, 1853), 312-13.

²⁵New Orleans Weekly Delta, October 2, 1853.

Cartwright himself. The author intended to correct the belief then finding support in many quarters that even the states of the extreme South were "not too hot to be cultivated by white labor." He maintained that the large majority of yellow fever fatalities occurred among that class of people which put into practice a popular abolitionist theory; that is, the white laborers who violated the laws of nature "in making negroes of themselves by doing the work in hot noon-day summer sun that negroes ought to do." Such practices were roundly denounced as "rank poison abolitionism." Admitting that those persons who had Negroes "to perform drudgery work and to fan them" were not entirely exempt from yellow fever, "Tuckahoe" contended that they were almost certain to recover from an attack. "Slaves and masters rarely die; if they do it is because they have been practicing on the abolition theory," which consisted in the masters exposing themselves to the hot sun and the slaves slipping away from white supervision. The lesson to be learned was that Negro slavery was not a curse, but rather a blessing to both races in the South. Finally, "Tuckahoe" suggested that the most effective quarantine against the yellow pestilence would be to prevent the practice of abolitionist

theories.²⁶ If the "Tuckahoe" article was not authored by Dr. Cartwright himself, the writer was at any rate ideologically very close to that physician.

Although the epidemic of 1853 affected more Negroes than any yellow fever epidemic ever had before, Cartwright continued to support his peculiar theory. The yellow fever fatalities among New Orleans Negroes in 1853, he explained, resulted more from panic than from the disease itself. "A negro never dies with it [yellow fever] in any locality, when treated with regard to his ethnical peculiarities; . . . even under mal-practice," he insisted, "death is the exception--and recovery, the rule,"²⁷

In 1854 Dr. M. Morton Dowler attacked Cartwright's view of a special medical methodology adapted for the treatment of the Negro. In his practice during the epidemic of 1854, Dowler had dealt with five cases of yellow fever among Negroes. "I treated them without reference either to free-soilism or the ultraism of . . . Dr. Cartwright, who, whatever he may expect from the laity, cannot expect any medical man, be he fire-eater, unionist or

²⁶Ibid., August 14, 1853.

²⁷N. O. Med. & Surg. Jour., XV (March, 1858), 150.

abolitionist, to swallow his paradoxes with regard to negroes." Describing one case of yellow fever in a Negro woman whom he had treated "on the same principles I would have treated a golden-haired daughter of Japhet," he claimed that she had responded rather well and had exhibited no ill effects from "white folks' diet" or the other usual treatment for Caucasians.²⁸

When in the epidemic of 1867 a considerable number of Negroes experienced yellow fever attacks, the editor of the New Orleans Medical and Surgical Journal commented on that phenomenon as an unusual characteristic of the epidemic, "following the solitary precedent of 1853." Further, mixing a bit of politics with pathology, he declared, "We infer that this is one of the civil rights conferred on that fortunate class by the late enlightened Congress, of which they are already availing themselves."²⁹

Whether the mildness of yellow fever exhibited in Negroes was based on a genuine or only an apparent immunity was a question which continued to intrigue the medical thinker. After the epidemic of 1905, Dr. Charles

²⁸Ibid., XI (November, 1854), 375.

²⁹Ibid., XX (September, 1867), 286.

Chassaignac of New Orleans concluded that the evidence of that epidemic clearly indicated that Negroes were as susceptible to the disease as whites, although as a rule they experienced only a mild form of the fever. He cited the mortality statistics from the vicinity of Tallulah, Louisiana, to support his conclusion. In that area, of ninety white cases, eighteen died, or about twenty per cent; of 950 Negro cases, only five died, or about one-half of one per cent. In the neighborhood of Patterson, Louisiana, of about 500 white cases, fifty-one died, but of the 200 Negro cases, only one died. Attempting to account for the racial difference, Dr. Chassaignac set forth the possibility of a greater resistance by the Negro to the yellow fever poison after it entered the system; but he was more inclined to believe that the Negro actually received a lesser dose of the infection in the first place because he was bitten less by the mosquito. "This may be due to his tougher skin," the doctor speculated, "or to the strong musky smell coming from his surface which may keep the mosquitoes away in a way analagous to that of pennyroyal and other strong scents which are used with that end

in view."³⁰

Even in the mid-twentieth century the existence of a partial immunity based on race has not been settled absolutely. It has been suggested, however, that the Negro's reaction to the disease is what one might expect to develop in a race exposed to yellow fever for countless generations. In fact, the mild and seldom fatal form of the disease in the Negro is one point in the argument for Africa as yellow fever's place of origin.³¹ During the course of any yellow fever epidemic, the disease has always evidenced a considerable amount of variation in the severity of its effects on individuals, regardless of the race factor. The reasons for this variability cannot be explained completely even today.

At any rate, there was an obvious susceptibility on the part of immigrants recently having come into the yellow fever locality, not because they were unaccustomed to the climate, but because they had not been previously exposed to the malady. Native or long-resident inhabitants,

³⁰Charles Chassaignac, "Some Lessons Taught by the Epidemic of 1905," in Augustin, History of Yellow Fever, 1054-55.

³¹Trent (ed.), "The Men Who Conquered Yellow Fever," loc. cit., 85.

on the other hand, exhibited a striking immunity by contrast, not because they were acclimated, but because many or most had experienced mild, undiagnosed cases at some previous time, probably as children. The connection between the lower classes and the prevalence and severity of the disease so often proposed by yellow fever theorists had a very real basis, but not for the reasons generally assumed by the upper class medical and lay philosophers--not because the Saffron Scourge was a class-conscious disease, nor because the Almighty sent down the plague upon the unclean, intemperate, and immoral portions of the population. But the slum areas were located near the waterfront, and the laboring classes who worked on the docks were most likely to contract the first cases of yellow fever after its initial introduction by vessels coming from Latin America. Also, the laborers were more likely to ignore the beginning symptoms of illness and to keep working until the disease became so far advanced that by the time they sought medical aid, it was frequently too late. Nevertheless, those of the well-to-do classes of New Orleans, if not immune by prior attack, were just as susceptible to yellow fever when bitten by an infected mosquito as the lowest man on the socio-economic scale.

Although the pattern of yellow fever's activity at times seemed to bolster the Creole's idea of himself as a member of a privileged immune class, and to tie in with pro-slavery, class consciousness, and opposition to immigration, the erratic behavior of the disease may be attributed primarily to circumstantial factors, in addition to the likelihood of a racial resistance on the part of the Negro. But to the nineteenth-century theorist, the related problems of susceptibility, immunity, and acclimation simply furnished more issues to be debated. As in all other questions relating to the disease, some evidence seemed to indicate a general pattern, but sufficient evidence always existed on the opposite side of every issue to taunt the intellect in its search for the rules of consistency.

CHAPTER IX

IMPACT OF EPIDEMIC YELLOW FEVER ON THE LIFE OF THE COMMUNITY

Directly or indirectly, epidemic yellow fever affected virtually every aspect of human affairs within a community under its influence. The inexorable march of a death-dealing epidemic malady against which medical science seemed helpless could scarcely be ignored by any susceptible individual within its path, and many Louisianians (particularly in New Orleans) lived and died under the shadow cast intermittently by the yellow pestilence for more than a century.

Reactions to the crisis precipitated by an epidemic in New Orleans and in the interior towns were different in some respects and similar in others. In 1854 Dr. T. A. Cooke of Washington, Louisiana, commented on the difference between city and country attitudes: "The effect of a fatal pestilence in towns of the country cannot well be conceived by those who have not witnessed it. It spreads alarm; the people are panic-stricken; and every death adds to the consternation, which sweeps over the land."

Ultimately, "every house becomes a barricaded castle," he said; "then ensues a disruption of the bonds which hold men together, and for the time society is dissolved." An epidemic in the country was not so easily forgotten as in the city. "In the country the dead were known to all," Dr. Cooke declared, "and the remembrance of virtue and merit is not buried with the mortal remains of the dead." On the other hand, the city, after the termination of a destructive visitation, was "like the sea, more tranquil after the tempest had subsided and the surge ceases to roll." While the country folk long retained an intense memory of pestilential terrors and suffering, the large populace of New Orleans rapidly fell back into the "coldest apathy" and the past was soon forgotten.¹ In the interior rural communities, the large majority of victims lost to the pestilence were known personally to nearly all the survivors; in New Orleans, while many persons grieved over lost friends and family, the thousands of fatalities could represent little more to the individual than an impersonal item of mortality statistics.

There were a number of reasons for this difference

¹N. O. Med. & Surg. Jour., X (March, 1854), 603.

between the Crescent City's attitude and that of the interior communities. In the first place, New Orleans experienced frequent visitations of yellow fever, and fairly early in the nineteenth century had come to accept the disease as a customary foe. Many New Orleanians, immune to the fever by childhood attacks, or at least believing themselves "acclimated," felt relatively secure. But the country towns only suffered occasional outbreaks; hence, when yellow fever did strike, almost everyone was fully liable to attack. The fear of the disease outside the Crescent City, then, was greatly intensified because of yellow fever's unfamiliar status. Furthermore, the ravages of the fever had a greater personal impact within the close-knit relationships of families and friends in rural communities.

Throughout the literature on yellow fever in nineteenth-century New Orleans, one can find expressions of this passive acceptance of periodic epidemics. Probably this indifference was felt mainly by those who could afford to be apathetic--the so-called "acclimated" native-born residents or those who had already experienced an attack of the fever. Undoubtedly, there were those remaining in the city who feared the disease; certainly there were many who

fled in terror at the approach of an epidemic, as well as those who journeyed elsewhere each summer before the coming of the fever. But those persons who always provided the bulk of yellow fever's victims--immigrants, particularly poor ones--unfortunately were not among the articulate and active business and civic community. Therefore, one can only speculate as to their relative fear or indifference regarding the pestilence. Perhaps they were generally unaware of the scourge of New Orleans, and hence could suffer no anticipatory terrors. Perhaps they considered yellow fever simply one more gamble along with countless other risks in the uncertainty of their existence. At any rate, New Orleans continued to attract large numbers of immigrants from Europe and other parts of America, and in spite of its reputation in the early nineteenth century as the Necropolis of the South, its population increased by leaps and bounds.

According to one nineteenth-century Louisiana historian, yellow fever had no more terrors for New Orleanians "than had for the ancients the skull which used to figure among the roses and other luxuries that adorned their banqueting tables." Some inhabitants of the Crescent City even "felt friendly to the scourge," believing that "it

checked that tide of immigration which, otherwise, would have speedily rolled its waves over the old population, and swept away all those landmarks in legislation, customs, language and social habits to which they were fondly attached."²

Describing this general indifference displayed in New Orleans, another nineteenth-century Louisiana writer noted that the Creole, who as a rule enjoyed immunity, worried little about the strangers victimized by the yellow pestilence. After all, nobody asked them to come to New Orleans. As for the American in the Crescent City, his primary interest was the immediate gain derived from commercial activity. And even if the summer brought the Saffron Scourge, nevertheless, the winter brought trade and prosperity!³ In the words of another historian, "the community was too busy with gainful pursuits to concern itself much about the fever, which was looked on rather as an established institution." Minimizing the importance of the disease, influential New Orleanians insisted over and over that the city was an unusually healthy place and

²Gayarré, History of Louisiana, IV, 636.

³Cable, The Creoles of Louisiana, 292.

that their epidemic fevers affected only the indigent immigrant and the intemperate.⁴

During the violent epidemic of 1858, the editor of the New Orleans Daily Delta remarked that the outsider undoubtedly would be interested to know that in New Orleans "Everywhere he would find but comparatively little attention paid to the scourge on the part of the great body of citizens." The first announcement of yellow fever in the city resulted in panic among the unacclimated, and those able to do so fled the scene. But, claimed the editor, the acclimated (in this case, those accustomed to the climate) felt no fear. In fact, "they seem to take the matter as coolly as if it was something expected annually, and about which it were idle to become alarmed." That editor also remarked that it was strange to observe how quickly those among the unacclimated unable to leave the city fell into "this prevailing state of indifference."⁵

On one occasion, a Crescent City minister allegedly commented, "I like the people of New Orleans; they are not afraid of epidemics, and when they die, do not whine about

⁴Kendall, History of New Orleans, I, 132-33.

⁵New Orleans Daily Delta, September 10, 1858.

it." Such a sentiment about such an attitude illustrates the apathy resulting from the frequency of yellow fever epidemics during the first half of the nineteenth century. Pestilential visitations were common, ordinary, expected, and accepted as apparently unavoidable disasters.⁶

In spite of the divergent attitudes and reactions toward the Saffron Scourge exhibited in the Crescent City and the other towns of Louisiana where the disease was less common, all epidemics produced certain common effects regardless of where they occurred. People suffered and died everywhere. The sick and their families had to be cared for. The normal channels of trade, travel, and transportation were disrupted. Hard times and unemployment followed. Because of the close economic relationship between New Orleans and its hinterland, an epidemic in the Crescent City, whether or not the disease spread inland, interrupted the flow of crops to New Orleans and supplies to the interior.

That epidemic yellow fever had serious economic consequences is unquestionable, although it is impossible to calculate in terms of dollars and cents the losses

⁶N. O. Med. & Surg. Jour., New Series, XIV (June, 1887), 920.

sustained by the business and laboring community. Almost every commentator noted the impact of the pestilence on commercial activity whenever and wherever it occurred. During severe epidemic visitations, business in New Orleans slowed to an almost complete standstill. Many commercial establishments closed down entirely, or remained open only during a portion of the day. Motivated by dread of the fever, thousands of persons left New Orleans during the summer, whether or not an epidemic occurred. Thousands more fled with the approach of the disease in epidemic form. Persons in the interior were afraid to go anywhere near the plague-stricken city until the coming of frost.⁷ Official or unofficial quarantine, which inevitably resulted, hindered the shipment of products to and from New Orleans. Most country merchants and planters refused to accept goods from New Orleans while yellow fever raged in the city. Furthermore, the spread of disease to the

⁷Latrobe, Impressions Respecting New Orleans, 147; Crescent, June 22, 1853; Picayune, October 8, 1853; Price-Current, August 20, 1853; Cable, The Creoles of Louisiana, 298-99; Smith and Son Company to Smith Company, September 3, October 3, November 14, 1839, October 17, 1840, October 22, 1841, T. Smith and Company Papers; Thomas W. Compton to Charles Mathews, July 4, 1856, Charles L. Mathews Family Papers (Louisiana State University Archives, Baton Rouge); Anonymous Letter, September 18, 1871, Miscellaneous Papers, ibid.

interior interfered with the harvesting of crops, causing severe losses, or at least resulting in a period of delay in the process of economic exchange.

In late August of 1853 the New Orleans Price-Current reported that the dreadful epidemic had completely deranged all business operations. Little produce of any kind was sent to New Orleans from the interior. Shipments of cotton were halted because of sickness in the port city and the river towns. In early October that journal again lamented the disruption of "the whole machinery of our commerce" and predicted that many weeks would be required for the process of readjustment. The epidemic, asserted the editor, had almost completely suspended intercourse with interior communities. Moreover, it had prevented northern and European vessels from coming to New Orleans, and many ships loaded with goods found it necessary to postpone their departure from the Crescent City because of strict quarantine regulations in northern ports.⁸

Voicing a sentiment which was becoming more and more prevalent during the 1850's, the editor of the New Orleans Bee commented in 1858: "Everyone is aware that

⁸Price-Current, August 20, 27, October 1, 1853.

the prevalence of yellow fever in our city is the chief drawback to our prosperity; that but for this haunting apprehension our summer population would not be materially reduced, nor would the tide of business recede from our shores." Since the progress of the Crescent City would be at least ten times greater "if our city were absolutely free from the terrors of the epidemic," the editor considered it the duty of New Orleanians, for the good of humanity as well as for the city's commercial interest, to inquire into the possibility of combating the pestilence.⁹ The Great Epidemics of the 1850's had brought about a greater concern regarding the customary foe and the possibility of doing something to solve that chronic problem, as much on economic grounds as any other.

The epidemic of 1867, like every other, disturbed the operations of commerce, and Crescent City newspapers reported daily the usual difficulties attendant upon the presence of the Saffron Scourge. In mid-September one editor remarked that business was "in a state of stagnation" because of the obstacles to trade and travel resulting from the unhealthy condition of the city.¹⁰ Another

⁹Bee, October 22, 1858.

¹⁰Ibid., September 15, 1867.

editor in early October complained of the business deadlock and the scarcity of money. Payment was due on notes held by northern firms for goods purchased several months before by New Orleans merchants. In ordinary times, the editor declared, such notes would have been paid off promptly; under the circumstances, however, he hoped the northern creditors would appreciate "the difficulties and stagnation caused by the dreadful scourge paralyzing the arm of trade" and would agree to wait until the coming of frost and the renewal of trade before demanding payment.¹¹

A series of letters from Thomas C. Porteous, a New Orleans merchant, to a Paris business associate during the epidemic of 1878 illustrates the serious concern felt by businessmen during epidemic seasons. In early August he wrote: "I regret very much to say that the health of the city continues to give much uneasiness as to its effect on the fall trade. . . ." Even in ordinary times August was the dullest month of the year for trade, but in 1878 "the yellow fever panic has driven nearly all our customers away and caused a rigid quarantine to be enforced all around us, which must almost paralyze the general trade

¹¹Picayune, October 11, 1867.

of New Orleans while it lasts."¹²

Several days later Porteous complained that the streets of the Crescent City seemed almost deserted. Quarantine had been imposed by every little village in every direction from New Orleans, and "in the store we are having the dulllest time I ever remember, no cash sales & collections almost impossible."¹³ Because of the shortage of cash receipts, he continued to worry about the financial situation of the business. And even if the fever died out within a few weeks, Porteous was afraid that quarantines would not be raised nor would families return to the city until October, "so that our trade will be bad in September as well as August." To this businessman, the situation was a "great drawback & a bitter disappointment . . . as I anticipated a fair business in August & September, based upon the fine condition of the crops & good prospects of our planters."¹⁴

Every letter from the pen of this unhappy merchant described the progress of the epidemic and its disastrous

¹²Thomas C. Porteous to I. Levois, August 3, 1878, Thomas C. Porteous Letter Book (Louisiana State University Archives, Baton Rouge).

¹³Ibid., August 6, 1878.

¹⁴Ibid., August 9, 1878.

effects upon commerce. In mid-August Porteous declared that "the present state of affairs is fairly killing business in New Orleans."¹⁵ On August 23 when the disease raging in the Crescent City had spread to many other places as well, he wrote his associate: "At present everything is excessively dull, the city seems dead & one does not know what to do, I fret myself that here with a store full of goods & with prices advancing in New York, we cannot sell anything. . . ." To make matters worse, he continued, "with plenty of good accounts on the books, which I examine every day, we cannot get any money, almost all our city people are away & with the quarantine we do not know if our letters to the country reach their destination."¹⁶ Continuing his complaint that retail trade was almost at a standstill, Porteous noted that few persons ventured out on the streets or into stores, "so there is no opportunity to push sales."¹⁷ In early September one of his salesmen and one of his business associates came down with the fever.¹⁸

¹⁵Ibid., August 13, 1878. ¹⁶Ibid., August 23, 1878.

¹⁷Ibid., August 30, 1878.

¹⁸Ibid., September 3, 10, 1878.

Finally, by October 15 when the epidemic began to subside, business activity gradually increased, as "ladies who have been staying in doors a great deal for the past 2 or 3 months, now begin to venture out & visit the stores & though not yet asking for fine goods, buy small articles which they see."¹⁹ Trade continued to improve and cash sales were increasing daily by early November. By late November, there was "no longer any sickness here & our absentees are returning daily by the hundreds, all we want now is a little cool weather & our trade will become quite active. . . ."²⁰

Even when New Orleans escaped a widespread epidemic and suffered only a few sporadic cases of yellow fever, the fear and alarm on the part of the inhabitants of the interior sometimes resulted in rigid quarantines. Those barriers affected business in almost the same manner as if a bad epidemic had occurred, by limiting the exchange of goods and postponing for several weeks the usual brisk trading activity based on the late summer harvest.²¹

¹⁹Ibid., October 15, 1878.

²⁰Ibid., November 2, 5, 15, 22, 1878.

²¹Porteous to R. Heydenreich, July 18, August 1, September 12, 1879, Thomas C. Porteous Letter Book; Porteous to E. Bourbon, July 22, September 2, 23, 1879, ibid.

Particularly in the latter nineteenth century, intra-state and interstate quarantine restrictions established against New Orleans and other infected (or supposedly infected) points throughout the South entangled trade and transportation to such an extent that contact between many areas was cut off altogether. New Orleans merchants and the railroad interests complained bitterly about losses due to the paralyzing effects of unreasonable quarantines. As for maritime quarantine, the commercial interests of the Crescent City were almost always at odds with the Louisiana State Board of Health over the cost and delay resulting from ship quarantine and disinfection. The Board, however, invariably countered with the argument that the direct and indirect losses suffered because of a yellow fever epidemic were so great that business interests should be willing to support quarantine and disinfection measures as the best insurance against an outbreak of the highly expensive disease.

Yellow fever epidemics invariably resulted in severe economic distress among the laboring classes of the population by interfering with the normal working of the economic system. The more widespread the epidemic, the greater the destitution among the laboring poor. The

economic hardship, for example, occasioned by the extensive spread of the pestilence through the South in 1878 necessitated an appeal for relief to the "Chambers of Commerce and the Charitable of the Chief Cities of the Union."

This appeal was signed by the president of the New Orleans Chamber of Commerce and by several other persons on behalf of the afflicted areas in Mississippi and Alabama. Requesting a comprehensive system of relief, the appeal suggested that a central headquarters, to receive donations of supplies, medicines, and clothing, be established in a number of large cities around the country. Transportation lines had volunteered to ship all provisions without charge to New Orleans, from which location the relief could be distributed to other desperate towns.²²

"All business is entirely suspended," the appeal declared. "It is estimated that in the suspension of business on the Mississippi River, south of Memphis, over fifty steamboats are tied up and their crews discharged." All those laborers who had been engaged in handling the freight were out of work. Moreover, four railroad lines had ceased to function, leaving their employees idle.

²²Picayune, September 12, 1878.

Wherever the fever prevailed, almost all business operations had ceased, and their employees joined the ranks of the unemployed. All those persons completely dependent on their labor for a living found themselves in destitute circumstances. It was estimated that at least 15,000 heads of households were unemployed in New Orleans, 8,000 in Memphis, and several thousands in scattered small towns, representing a total of over 100,000 persons in dire need. "For them there is no labor, no wages, no bread--nothing but death, or starvation; and this condition must last at least for fifty days . . . until frost." Somehow these people had to be fed. In addition to the provision of bare subsistence, funds were also required for necessary clothing, medicines, care of the sick, and burial of the dead.²³ Not only in 1878, but in every other severe epidemic which devastated New Orleans and other southern communities, contributions poured forth from generous individuals, businesses, and communities all around the country.

In terms of human lives and property, the cost of epidemic yellow fever to New Orleans, the State of

²³Ibid.

Louisiana, and the South during a hundred-year period is incalculable. Including such factors as the potential economic worth of human lives, the value of labor diverted from productive endeavor by illness or care of the sick, the cost of medical attendance, supplies, burials, charity, crop spoilage, investment losses, and the general disturbance to business conditions, the cost of one epidemic --that of 1878--to the Crescent City alone was estimated at twelve to one hundred million dollars!²⁴ From 1796 through 1905 New Orleans experienced no less than thirty serious epidemics--and many more if one included all those outbreaks which were mild only in comparison with the violent ones. Thousands upon thousands of lives, millions of dollars, and untold and immeasurable quantities of intangible human suffering, anxiety, and grief were expended in tribute to the pestilence before the ultimate triumph of medical science and public health in banishing the Saffron Scourge from the shores of the United States.

The field of life insurance provides another example of yellow fever's influence on the various aspects

²⁴Proceedings of the Board of Experts Authorized by Congress . . . 1878, 31-35.

of business arrangements. In 1848 De Bow's Review protested against the ignorance of the North regarding the health of southern states: "Their insurance companies exact a higher premium if the party, being a southerner, remain at home during summer . . . yet permit him to spend his winter in New-England, where, perhaps, his chances of life would be diminished one-half!" Furthermore, complained that southern journal, "For New-Orleans many of the companies refuse to insure altogether! Sapient statisticians these."²⁵ But there was ample evidence to justify the policy of the Yankee companies. A New Orleanian, unless he could supply evidence of his having survived an attack of yellow fever, was definitely a bad risk.

The increased demand for certain goods during an epidemic always encouraged some shrewd and unscrupulous businessmen to take advantage of the situation. Examples may be cited in regard to three items in great demand during a yellow fever outbreak: coffins, ice, and medicines. In the midst of the epidemic of 1839, the New Orleans Picayune editor angrily reported an incident relating to traffic in coffins. "Speculations in wooden

²⁵De Bow's Review, VI (September, 1848), 226.

nut-megs, bass-wood hams and horn flints we look upon as 'fair business transactions,'" he asserted indignantly, "but the man who can look complacently forward to a season of epidemic and mortality, and prepare to turn a time of death and mourning to profitable account, we view as a soulless, unsympathising scoundrel; with a heart--if he have one at all--as black as the plumes of a hearse."

Early that summer a New York speculator had made a large shipment of coffins under a false bill of lading to a New Orleans mercantile house. The coffins, of assorted sizes, had been packed one inside another into nine cases and labeled "Pianos--With Care." The New Yorker's letter to the New Orleans business establishment regarding the "piano-fortes" stated: "As the taste for music appears to be making rapid strides in the South, and as instruments such as I send you, must inevitably increase in value, I would advise, that at present you merely take them into your warerooms, permitting them to remain in the cases, subject to my future directions. . . ." According to the Picayune, the New Orleans merchants involved in the transaction, on discovering the true nature of the merchandise, had become so enraged by the "endeavor to make them a tool in so disreputable a 'commission business'" that they sold

the coffins to the Charity Hospital for one dollar each.²⁶ Unfortunately for the New Yorker, he chose the wrong firm, or the wrong method, and failed in his scheme to profit from the harvest of the pestilence.

Others had better luck in profiteering. The excessively high price of ice in New Orleans during the epidemic of 1878 became a matter of concern to the Board of Health as well as the city government. Monopolizing the importation and sale of ice in New Orleans, the Crescent City Ice Company set the price beyond the reach of many persons while the yellow fever epidemic was in progress. When the mayor and the Board of Health began to make inquiries about purchasing and transporting ice from several northern cities, representatives of the ice company felt it necessary to call on the mayor to stave off such a drastic measure. Although their present supply of ice was small, they explained, large amounts were then on the way to New Orleans and there was absolutely no danger of an ice famine in the city. On behalf of the company, they promised to reduce the price immediately to forty dollars per ton, and when the new shipments arrived, the price would be reduced

²⁶Picayune, August 31, September 1, 1839.

still further. Under the circumstances, the mayor decided to take no further action on the matter. Nevertheless, the Picayune complained of the unreasonable prices set by the monopolists who were obviously taking advantage of the temporary ice shortage together with the increased demand during the epidemic. On the basis of figures showing that ice could be purchased from a firm in Maine for two dollars per ton and shipped to New Orleans for three dollars or less, the editor felt there was no justification whatsoever for the ice company's high charges exacted from a city in the throes of a disaster.²⁷

During New Orleans' worst epidemic of all times, the visitation of 1853, there were numerous complaints against druggists who charged extremely high prices for medicines. In ordinary times the drugs would have been considered expensive at one-half or one-third the rate charged during the crisis. One Crescent City journal contended that no conscientious apothecary could possibly engage in such unethical profiteering and expressed the hope that the reports circulating about that practice were

²⁷Ibid., July 26, 27, 28, 1878.

gross exaggerations.²⁸ But not all apothecaries were as conscientious as that journalist wanted to believe.

During the epidemic of 1853 the Howard Association discovered several cases of collusion between physicians and druggists to overcharge for prescriptions paid for by the benevolent society. To increase the drug bill for each patient cared for by the Howards, the physician prescribed a greater quantity of medicines than the yellow fever victims could possibly consume. The druggist then shared his increased profits with that physician. But when the Howards pointed out to certain apothecaries that no man, sick or well, could have taken as much medication as was claimed and suggested that the bill be inspected by another druggist or physician, the fraudulent claim was almost invariably reduced.²⁹ Certainly in every epidemic there must have been instances of greedy individuals who turned a calamity into an opportunity for unreasonable profits. For most businessmen, however, Yellow Jack brought losses rather than profits.

Yet despite the adverse influence of epidemic yellow

²⁸Ibid., August 17, 1853.

²⁹Robinson, Diary of a Samaritan, 271-72.

fever upon New Orleans' economic affairs, the set-back each time proved to be only a temporary one. As cool weather set in and the epidemic subsided, the business season opened gradually, then very rapidly moved into full swing. Ships arrived and departed from the port of New Orleans, and the crops of the interior poured into the city along with orders for supplies and goods of every variety. New Orleans filled up with thousands of newcomers as well as the returning summer absentees, and the gaiety of social life along with serious business activity dispelled the gloom of the previous months. The previously desolate city was transformed almost overnight into a gay, lively, dynamic scene of feverish activity, and every memory of the painful scenes of the summer and early fall months was relentlessly shoved into the background.³⁰

Strangely, the menace of yellow fever did not seem to discourage great hordes of persons who flocked to the Crescent City annually, swelling the city's population from 8,000 to nearly 300,000 in the course of the nineteenth century. In the last days of the epidemic of 1817, one resident remarked that "New Orleans may be compared

³⁰Ibid., 297-98.

to a Plate of Honey. Thousands of insects come & satiate themselves with the sweet food, and die--but where one dies, a thousand visit the delicious repast. So it is with men--where their interests lie, they'll come to the place, tho' death may stare them in the face."³¹ But, assuming that the constant threat of the pestilence did hinder many persons who might otherwise have moved to New Orleans, and taking into consideration the thousands who died there each year (not only from yellow fever but from the many other endemic and epidemic maladies present in that sickly city), one can only speculate about what the growth of the Crescent City might have been without its unhealthy influences.

Not even the prospect of disease and early death could interrupt "the forward march of the city" during the first half of the nineteenth century; "even the memory and grief of it were passing shadows," wrote Grace King in New Orleans; The Place and the People. On the contrary, she declared, New Orleans in that period enjoyed "more emigrants, more imports, more exports, more trade, more cotton, sugar, plantations, slaves; and to off-set, the more death,

³¹Walter Prichard (ed.), "Three Letters of Richard Claiborne to William Miller, 1816-1818," Louisiana Historical Quarterly, XXIV (July, 1941), 739.

the more life, the city's gayety, like the city's gold, mounting in the flood tide over it."³²

Even in the midst of a paralyzing epidemic, such as that of 1853, optimism remained the prevalent note among some elements in New Orleans. For example, in August the editor of the Daily Crescent, maintaining a high level of enthusiasm, discounted the notion that the epidemic would ruin the city. Many epidemics had come and gone and never ruined New Orleans, he declared; furthermore, they never would! Instead of diminishing the population, the epidemic would actually increase it as people flocked in to seek those positions left vacant by yellow fever's victims. The death of one man would attract two to fill his place, and business would be more active than ever. The pestilence did not drive people away, the editor asserted, but, on the contrary, attracted those adventurers who would brave any danger. The editorial concluded with an optimistic, although at the same time rather callous, reflection: "There is a good time coming for the fortunate who live to see it."³³

³²Grace King, New Orleans; The Place and the People (New York, 1895), 287-88.

³³Crescent, August 31, 1853.

The attitudes and policies dominating the world of journalism were intimately related to the outlook of the business community. Until the latter nineteenth century, Crescent City journals failed to provide prompt or accurate reporting on yellow fever in the city, always attempted to discount the severity of an epidemic, and falsely praised New Orleans as an extraordinarily healthy place. These characteristics of newspaper policy have been discussed to some extent in earlier chapters. It should be noted further that the direct influence of commercial interests often dictated that policy.

In 1819 Benjamin Latrobe asked a newspaper editor why the journals avoided the subject of yellow fever's prevalence in New Orleans when the knowledge was general throughout the city. The editor answered "that the principal profit of a newspaper arising from advertisements, the merchants, their principal customers, had absolutely forbid the least notice of fever, under a threat that their custom should otherwise be withdrawn. . . ." Thus, said Latrobe, the merchants and editors sacrificed "to commercial policy the lives of all those who, believing from the silence of the public papers that no danger existed, might

come to the city."³⁴

Before the news of the prevailing fever became generally known in 1853, the Howard Association had already begun their relief work among the indigent sick in the Crescent City. The notice of the Howards' initial meeting published in the city papers did not even mention the words yellow fever. In fact, they "were requested by editors and merchants to withhold publication of our acts, as the report of an epidemic--which might yet be checked--would entail severe loss on merchants and shopkeepers."³⁵

An article in De Bow's Review describing the destructive visitation of 1853 noted the reluctance of New Orleans journals to report information regarding the presence of yellow fever. Not until the last possible moment, when the daily mortality was too great to ignore and alarm was general throughout the city, were the papers willing to publish any reference to the disease. Frequently, the first news of fever in the Crescent City came to its inhabitants through the country papers. "New-Orleans being an entirely commercial city, the love of money and

³⁴Latrobe, Impressions Respecting New Orleans, 146.

³⁵Robinson, Diary of a Samaritan, 122.

self-interest prevail there as much as in other commercial communities," the article stated; "and it is a standing maxim in the commercial world that nothing must be said that might injure trade."³⁶

In its report for 1873 the Board of Health declared that as soon as yellow fever made its appearance in New Orleans that year, a deputation of merchants called upon the policy-makers of the Crescent City journals and requested that the weekly mortality reports supplied by the Board of Health not be published. All agreed except the editor of the German Gazette. Consequently, as the Board had predicted, exaggerations spread throughout the country, and no official information was readily available to "control the public imagination."³⁷

While the newspapers sometimes refused to publish information furnished by the Board of Health and almost always set forth a distorted view of health in the city, at the same time they went to great pains to correct the so-called exaggerations and erroneous opinions appearing in the journals of the interior, the North, and even

³⁶De Bow's Review, XV (December, 1853), 598.

³⁷Report of the Louisiana State Board of Health for 1873, 74-75.

England. In April of 1852, for example, the Picayune complained of reports in northern papers to the effect that the unfortunate Crescent City was anxiously "expecting the near approach of the plague." Sarcastically, the Picayune editor remarked that "we of New Orleans are expected not only to submit with resignation to any sanitary evils, but actually to welcome them with unalloyed delight as a necessary accompaniment of our existence." The outsider's conception of life in New Orleans, according to that editor, consisted of "cotton bales and yellow fever, balls, duels, operas and cholera. . . ." New Orleanians knew they had a healthy city and should never be disturbed by nonsense set forth by those who knew nothing of the true situation, the editor reassured the citizenry.³⁸

In June of 1853 while yellow fever was steadily gaining ground in New Orleans with no paper as yet discussing its presence, the Delta editor undertook to explain how "by accident" a report from Charity Hospital found its way into that journal's columns "without the supervision we usually give to such matters." The report had listed two cases of fatal black vomit, and the editor feared that such

³⁸Picayune, April 8, 1852.

an isolated fact, without explanation, might produce an erroneous impression in the city and elsewhere. But those two cases had been imported from Havana, he contended, and hence there was nothing to fear. Reminding the proud citizens that New Orleans was "one of the healthiest cities of the Union," he maintained that the Crescent City had suffered too long from "traditional vileness and bug-bear stories" propagated by outsiders. Therefore, the Delta editor felt it necessary that "nothing calculated to mislead persons abroad or citizens at home, should have publicity."³⁹

During the epidemic of 1867 the New Orleans Bee criticized several northern newspapers for reporting that the New Orleans authorities and the journals were in collusion to withhold information regarding the severity of the pestilence. Such a statement, declared the Bee editor, was nothing less than an "abominable lie." He was not surprised, however, that such a notion could gain credence in the North, "for they are ready to believe anything unfavorable about us."⁴⁰

³⁹New Orleansn Weekly Delta, June 12, 1853.

⁴⁰Bee, September 4, 1867.

On countless occasions the New Orleans press protested bitterly against the so-called exaggerations in country newspapers on the subject of yellow fever in the city.⁴¹ People in the hinterland soon learned not to trust the New Orleans journals on the health of the Crescent City. They listened instead to reports supplied by émigrés passing through, or relied on information furnished by correspondents in New Orleans. Naturally, the city newspapers attempted to discredit the reports of disease advanced by the journals of the interior--whether or not they were true.

Sometimes even the English press received a share of criticism for "distorting" the picture of health in New Orleans. In 1853 the Picayune lashed out at several English journals for their allegedly unfair treatment of the disease-ridden city. "They find the ordinary sanitary, physical and moral condition of New Orleans to be horrid," the Picayune editor stated. He thought it strange indeed that outsiders always professed to know so much more about the affairs of the city than those present on the scene.⁴²

⁴¹Picayune, July 26, August 19, 1853; New Orleans Daily Delta, August 10, 1858.

⁴²Picayune, September 29, 1853.

The problem was that New Orleanians did not always tell, or even admit, all that they knew.

Finally, in the latter nineteenth century as improved means of transportation and communication knit the country ever more closely together, it became completely impossible to conceal the presence of disease in the Crescent City, especially after the United States government began to take a greater interest in fighting the introduction and spread of epidemic disease. In the midst of the epidemic of 1897 the editor of the New Orleans Times-Democrat declared that the old policy of not reporting on yellow fever until it had become fully epidemic had "brought New Orleans to the verge of ruin."⁴³ In a similar declaration the Picayune editor maintained that the concealment of disease was not only unwise but also impossible and could result only in ultimate exposure and harsh criticism for the deception.⁴⁴

Along with many other economic and social activities and institutions affected by the disruptive influence of epidemic yellow fever, educational institutions also felt

⁴³Times-Democrat, September 7, 1897.

⁴⁴Picayune, October 13, 1897.

the impact of the pestilence. Yellow fever epidemics ordinarily erupted in July or August and lasted until sometime in October, November, or even early December. Hence, during epidemic years, it was usually necessary to postpone the opening of the public schools until the disease had subsided, causing a delay of at least a month or more after the regularly scheduled opening date.⁴⁵

The colleges and the medical schools also found it necessary to postpone the beginning of their regular sessions.⁴⁶ In addition to the problem of sickness and death from yellow fever itself, which claimed the lives of some faculty members and students and discouraged the attendance of others, quarantine barriers in the later period also hindered the arrival of out-of-town students. In fact, the epidemic of 1905 and the resulting quarantine entanglement all but ruined Tulane's football season. Since the players were scattered over the state, quarantine restrictions made it virtually impossible to gather them

⁴⁵De Bow's Review, XV (December, 1853), 626; Wharton Diary, August 28, October 1, 7, 1858; Picayune, August 29, 1858, September 4, 1867, October 3, 1905.

⁴⁶Picayune, October 28, 1905; N. O. Med. & Surg. Jour., LI (October, 1898), 213.

together and whip them into shape before the end of the season.⁴⁷

Another instance in which yellow fever influenced educational institutions in New Orleans involved its "retarding effect" upon the growth of the Charity Hospital Training School for Female Nurses, established in 1894. In her report for 1905, Sister Agnes, Directress of the Training School, stated that the epidemic not only had discouraged many applicants, but also had raised the question of the "advisability" of accepting non-immunes. Of some 300 application forms sent out on request that season, only fifty-two had been returned. According to J. M. Batchelor, Chairman of the Training School Faculty, the largest class thus far was graduated in 1905; but, he noted, the school had not yet reached its full capacity. Although an increase in the number of trainees had been contemplated, "owing to circumstances over which we had no control, and which forbade entrance of non-immunes into this city, our intentions were not fulfilled."⁴⁸

Sometimes during epidemic seasons in New Orleans,

⁴⁷Picayune, October 13, 1905.

⁴⁸Report of the Board of Administrators of the Charity Hospital . . . for 1905, 50, 52.

public school buildings served as temporary yellow fever hospitals and orphan asylums under the direction of the Howard Association, the Board of Health, or the Charity Hospital authorities.⁴⁹ In 1905 the public schools, in full operation by early October, provided one more theater in the educational campaign against the Aedes aegypti mosquito. Children heard lectures on the deadly culprit of transmission and carried home pamphlets containing instructions for fumigating, oiling, and screening.

In the grim battle against epidemic yellow fever, waged time after time in the communities of Louisiana and the South, the medical profession, above all, bore the greatest burden of responsibility. For over a hundred years physicians faced the task of combating a deadly disease which spread from person to person and place to place in a strange and unpredictable manner and which operated in seeming defiance of all forms of therapy. Some patients lived and others died regardless of the varied treatment employed. From the late eighteenth century until the early twentieth century, no doctor who practiced for any length

⁴⁹De Bow's Review, XV (December, 1853), 626; Picayune, September 24, 1897.

of time in New Orleans or certain other Louisiana communities could ignore the yellow fever enigma. And among medical riddles probably none other provoked so much controversy, diversity of opinion, and professional antagonism.

Yet the Saffron Scourge seems to have been one of the principal forces in bringing together the French physicians of New Orleans in their first professional organization, La Société Médicale de la Nouvelle Orléans, established in 1817. The devastating epidemic of 1817, the most violent up to that time, must have convinced the New Orleans medical profession that it was necessary to pool their intellectual resources in a cooperative effort against the deadly scourge of the Crescent City. One of the first official actions of the society was the appointment of a committee to inquire into the causes and treatment of the recent epidemic fever. In 1820 when the English-speaking physicians joined to form the Physico-Medical Society, they too directed their initial efforts toward a study of the yellow pestilence. Alternately active and inactive, these medical organizations and others which developed in nineteenth-century Louisiana always devoted a great deal of attention to yellow fever, a subject which gradually led to a consideration of the vitally

important question of public health.⁵⁰

In the course of service during the hundred years' war against the pestilence, the medical profession of New Orleans and elsewhere lost a considerable number of practitioners from its own ranks to the deadly foe, particularly among the "unacclimated" from other sections of the country.⁵¹ Strangely like Camus' existentialist physician in La Peste, many medical men labored on day after day, week after week, month after month; operating in the darkness of seeming helplessness against the malady's ravages, yet exerting all their energies toward alleviating the discomfort and anxiety of as many patients as possible; frequently unable to effect a cure and seldom knowing exactly why. Describing the role of the medical man in epidemic disasters, one observer wrote: "I have always sympathized with the physicians in New Orleans. Their duties in a sickly season are most arduous and responsible. Often have I seen them in a few weeks reduced to their beds by anxiety, toil, watchings, and disappointment. . . ." And to make matters worse, he added, "multitudes, instead

⁵⁰William Dosite Postell, "The Medical Societies of Louisiana Prior to the War Between the States," New Orleans Medical and Surgical Journal, XCIII (August, 1940), 69-72.

⁵¹N. O. Med. & Surg. Jour., X (September, 1853), 279.

of thanking them, have cursed them, because they did not at once expel the epidemic from the city, which they could no more control than they could raise the dead."⁵²

In a similar vein Dr. Erasmus Fenner declared: "There is, perhaps, no place in the world where more charity service is done by the medical profession than in New Orleans . . . but I am sorry to add, that I know of no place where these benevolent services are more lightly appreciated than here."⁵³ During pestilential visitations, physicians often ran notices in the newspapers offering to "attend gratuitously" to the indigent sick.⁵⁴

In general, the members of the New Orleans medical profession throughout the period of yellow fever's destructive activities merited high praise for their generosity, humanitarianism, and tireless labors in attending to the fever's victims. As in all fields of human activity, however, one can find examples of ignorance, greed, and callousness. A member of the Howard Association in the mid-nineteenth century criticised those medical

⁵²Duffy (ed.), Parson Clapp, 106.

⁵³Fenner, Epidemic Yellow Fever, 70.

⁵⁴Picayune, August 23, 28, 1839; N. O. Med. & Surg. Jour., X (November, 1853), 387.

practitioners who "wring the last dollar from suffering humanity in advance of every service performed, and, when no more can be exacted, abandon them for nature to do the rest." Some physicians offered their services to the Howard Association, accepted the salary provided, then proceeded to extort additional payment from the association's patients. "If they did not succeed in obtaining money from our patients," complained one Howard Association member, "they would divide with the apothecary the bill of expensive prescriptions."⁵⁵

Epidemic conditions, which supplied the regular medical profession with more work than could easily be handled, provided ample opportunity for the practice of quackery by anyone who wished to pass himself off as a doctor. Yellow fever sufferers and their families seldom demanded that the attending physician present his credentials, nor could they have evaluated his ability in any case.⁵⁶ Many forms of quackery prevailed. During epidemic seasons, numerous advertisements for yellow fever preventives

⁵⁵Robinson, Diary of a Samaritan, 79-80.

⁵⁶Crescent, August 22, 1853; New Orleans Weekly Delta, September 4, 1853; Robinson, Diary of a Samaritan, 80.

and remedies appeared in the Crescent City newspapers-- sometimes even before the journals had discussed the disease editorially. The preposterous claims, accompanied by testimonials, endorsed by self-styled doctors, and advanced to ensnare the gullible were only slightly less subtle than the techniques of the twentieth-century "hidden persuaders." Brandreth's Vegetable Universal Pills and Holt's Prescription and Remedies for Yellow Fever, along with countless other preparations, could be purchased for home treatment of the disease.⁵⁷ Dr. Radway's Ready Relief, Regulating Pills and Resolvent were supposed to prevent and cure not only yellow fever but also typhoid and ship fever; fever and ague; bilious, remittent or intermittent fever; cholera, dysentery, flux, and diarrhea; smallpox, measles, scarlet fever, croup; as well as "all diseases or complaints incidental to the human race."⁵⁸ If one "carefully and constantly" used Duffy's Pure Malt Whiskey, "A SCIENTIFIC REMEDY, NOT A BEVERAGE," according to the advertisement, "No disease germ can

⁵⁷Picayune, May 25, 1838, October 1, 1843.

⁵⁸Ibid., December 7, 1859.

POSSIBLY remain lodged in the body. . . ."59 A sparkling mineral water called Red Raven was also proclaimed as a yellow fever prophylactic, "which cleanses the system and is absolute death to germs."60 Then there were also Dr. J. N. Lee's invention of the Portable Hot-Air Bath Chamber and the Thermal Wrap announced in the 1880's, which he insisted would serve to prevent as well as cure yellow fever along with every other ailment known to man.61

After the discovery of the mosquito vector, another advertising angle came to light. During the yellow fever epidemic and anti-mosquito crusade of 1905, this restrained, if slightly misleading, advertisement appeared in the Picayune:

TO THE PUBLIC:
 Mosquito Bites Rendered Harmless
 by the use of Dr. G. H.
 TICHENOR'S ANTISEPTIC

 rub in well62

⁵⁹Ibid., September 21, 1888.

⁶⁰Ibid., August 7, 1905.

⁶¹J. N. Lee, Life. The Philosophy of its Origin and Preservation. A Brief Outline of the Fundamental Principles of Scientific Medicine. The Nature of Endemic Yellow Fever . . . with an Infallible, Preventive and Cure for it, as well as the Epidemic Yellow Fever . . . (New Orleans, 1883).

⁶²Picayune, August 6, 1905.

Several other products were advertised more flamboyantly and specifically as yellow fever preventives. Disinfectine, "the modern toilet Soap," which "opens and searches the pores--destroys and removes the germs," was guaranteed to heal mosquito bites and prevent yellow fever as well as many other diseases. Littell's Liquid Sulphur, taken internally and added to the bath water, "absolutely" prevented mosquito bites and put the blood in such good condition that the consumer was promised complete immunity "from all contagious or infectious diseases."⁶³ As in every age, shrewd operators profited from the fear and credulity of those persons, who for one reason or another would not call on a physician. It should be noted, however, that the inadequacies of nineteenth-century medical practice itself actually encouraged the development of irregular medicine in the days before the medical profession was truly a profession.

The clergyman, like the physician, was called upon for an extraordinary performance of services during epidemic seasons. Protestant ministers and Catholic priests were in constant demand day and night to "soothe the last

⁶³Ibid., August 4, 6, 1905.

hours of the dying," to administer the last rites in the case of Catholics, and to comfort the surviving members of the family. Amid the disorder of a raging epidemic, it was impossible for the clergy to perform all services at the grave. Consequently, brief services were held in the homes of the deceased or in the chapels. Many were buried without benefit of clergy; in some cases, laymen administered the final prayers over the grave.⁶⁴

Although some Protestant ministers fled the scene in fear and trembling along with the other émigrés, they seemed to represent the exception rather than the rule. Many a clergyman, both Protestant and Catholic, fell prey to the pestilence while performing his pastoral duties.⁶⁵ In addition to the arduous task of attending to last rites and funeral services of the hundreds of yellow fever victims, clergymen were constantly occupied in visiting the sick and sometimes even acting as doctor and nurse, administering to the sickness of the body as well as that of the

⁶⁴Robinson, Diary of a Samaritan, 119, 259-60.

⁶⁵[A. Walker], "History and Incidents of the Plague in New Orleans," Harper's Magazine, VII (June-November, 1853), 806; Robinson, Diary of a Samaritan, 119, 259-60; Joseph B. Stratton Diary, Joseph B. Stratton Papers (Louisiana State University Archives, Baton Rouge), November 22, 1853, January 18, 1854.

soul.⁶⁶ And after an epidemic subsided, the work of the clergyman was by no means over. Destitute families, widows, and orphans looked to the minister or priest for advice and assistance. In a small community, the distraught epidemic-scarred populace sometimes turned to the clergyman for leadership in the task of reorganization and readjustment. His residence often served as a headquarters for the collection and distribution of clothing and provisions contributed for the relief of the needy.⁶⁷

Throughout the nineteenth century while the essentially mysterious nature, origin, and transmission of yellow fever remained beyond the comprehension of medical scientists as well as laymen, a particular religious significance was attached to pestilential visitations. Helpless in the face of an epidemic calamity, the people of an afflicted community turned to God to beg forgiveness and a cessation of his wrathful punishment. During the awful visitation of 1853, the Presbyterian ministers of

⁶⁶Walker, "History and Incidents of the Plague in New Orleans," loc. cit., 806; Stratton Diary, January 18, 1854.

⁶⁷Duffy (ed.), Parson Clapp, 102-104; Autobiography, Emily Caroline Douglas Papers (Louisiana State University Archives, Baton Rouge), 318, 320-22.

New Orleans called for a "Union Meeting for humiliation and prayer" to be held at 5 P.M. daily throughout the remainder of the epidemic. They invited the members of all churches "to unite with us in humbling ourselves before our Maker and in acknowledging His Sovereignty over us, and in supplicating Him to deliver us from the pestilence that now desolates our city." Furthermore, they asked that all Christians pray in behalf of New Orleans "that God will be pleased to turn His anger away from us."⁶⁸

A special prayer was prepared by Bishop Leonidas Polk in 1853 and recommended for use in all the churches in the Protestant Episcopal Diocese of Louisiana during the prevailing epidemic. The prayer acknowledged that "we, thy servants" had "grievously sinned, by thought, word and deed and that by our sins we have most justly provoked thy wrath and indignation against us." In a long and eloquent petition Bishop Polk's prayer begged for mercy and forgiveness and asked that God "turn from us the ravage of the pestilence, wherewith for our iniquities, thou art now visiting us."⁶⁹ Also in 1853

⁶⁸Crescent, August 31, 1853.

⁶⁹Picayune, August 24, 1853.

the Mayor of New Orleans set aside a special day "for the general voice to rise in supplication to Almighty God, that he may be pleased to lighten the heavy burthen of grief, sickness and death."⁷⁰

At least one dissenting voice was raised in protest against blaming God for the epidemic. In a statement published in the Picayune, Theodore Clapp, Unitarian minister, refused to accept the proposition that "the epidemic ravaging our city is a display of God's anger." Were New Orleanians any more "deserving at present of Heaven's wrath" than the people of London, Paris, Boston, New York, or any other city? Dr. Clapp did not think so. The afflictions of human life might be "a test of moral character," he declared, but to credit God with indiscriminate wrath and vengeance poured out upon the faithful and the wicked alike was to place God beyond all love and respect.⁷¹

But Dr. Clapp and others like him remained in the minority as long as the pestilence remained a mystery. Even as a day of humiliation and prayer had been recommended

⁷⁰Ibid., August 31, 1853.

⁷¹Ibid., September 2, 1853.

by municipal or state authorities during and after epidemic visitations in an earlier period, so during the widespread epidemic of 1878 Governor Francis T. Nicholls proclaimed October 9 as a day of "fasting, humiliation, and prayer." All Louisianians were asked to "join in a concert of devout petition to the Almighty to stay his severe chastisement and to spare an afflicted people."⁷²

In 1897 some persons still considered the wrath of God a factor in pestilential visitations. The Picayune printed the full text of a sermon delivered by the minister of the Evangelical Lutheran Church, in which he called the epidemic a "chastisement" sent down upon New Orleans by God "for wise purposes of his own." The mild scourge of 1897, declared the minister, should be considered "a warning for our citizens to repent." Advocating moral sanitation, he felt that the impure moral atmosphere of New Orleans called for as thorough a cleansing as the streets, gutters, and other filthy aspects of the city.⁷³ Also in 1897 the Picayune reprinted Bishop Polk's prayer of 1853.⁷⁴

⁷²Bee, November 3, 1841; New Orleans Democrat, October 2, 1878; Picayune, October 3, 1878.

⁷³Picayune, October 7, 1897.

⁷⁴Ibid., October 25, 1897.

In the epidemic of 1905, after yellow fever's transmitter had been positively identified, the New Orleans clergy participated actively in the anti-mosquito campaign, preaching from their pulpits the crusade against the Aedes aegypti as if it had been the devil himself. Apparently, however, almost nothing was said about the wrath of God as a factor in that last epidemic.

In spite of the constant exertions of the medical profession and the clergy, severe epidemic conditions required the labors of countless volunteer relief workers and an extraordinary amount of charity. The indigent sick and their families had to be cared for, and the problem became progressively acute as the population of New Orleans increased. On a number of occasions in the early nineteenth century, the municipal government attempted to provide some measure of assistance to the destitute victims of yellow fever by appointing and paying several physicians to attend to their needs and by providing funds for the necessary medicines and food.⁷⁵

⁷⁵Proceedings of the City Council of New Orleans, Vol. 3, Book 1, June 7, 1817 to December 29, 1818 (W.P.A. typescript, New Orleans Public Library), 40, 48-50; Louisiana Courier, September 8, 1819, August 28, 1820, October 2, 1822; Picayune, September 7, 1837.

In the course of the nineteenth century dozens of societies were organized in the Crescent City and in other communities visited by yellow fever to provide emergency relief for their own members or for the indigent sick in general. Without such organized endeavors, starvation itself would have added thousands to the mortality lists, and countless yellow fever victims would have died without attention of any kind. The vast array of organizations differed considerably in form and procedure, but all engaged in the common task of ameliorating the distress produced by epidemic yellow fever. The Masons, the Odd Fellows, the Young Men's Christian Association, labor unions, and various other professional, social, and religious groups established special relief committees to minister to the needs of their members or to extend charitable services to destitute fever patients and their families.⁷⁶

Other societies, especially among national groups and laborers, were established in the 1840's and 1850's for the express purpose of providing a form of mutual

⁷⁶De Bow's Review, XV (December, 1853), 629; Crescent, August 31, 1853; Picayune, August 29, 1858; Bee, September 3, 1858; Baton Rouge Advocate, November 29, 1878.

insurance for the members, such as the Ibero Benevolent Association, the Portuguese Benevolent Association, the Italian Mutual Benevolent Society, the German Benevolent Association, the Jewish Benevolent Relief Association, the United Laborers' Benevolent Association, and the Firemen's Charitable Association. Particularly significant during epidemics, these organizations supplied financial aid to any member who fell prey to sickness, and in the event of his death, made some provision for his widow and orphans. The Ibero Benevolent Association, for example, was designed "to provide for and assist those of its members who through sickness or other . . . circumstances, may become destitute, and also to inter with proper ceremonies, the bodies of such as demise." Only a native Spaniard might become president, but anyone "of irreproachable character" might join the society by paying an initiation fee of three dollars and monthly dues of fifty cents. In 1878 the Mutual Benevolent Relief Association, a Negro group in New Orleans, and Negro organizations elsewhere attended to the destitute sick among their race.⁷⁷

⁷⁷Gardner & Wharton's New Orleans Directory, for the Year 1858 . . . (New Orleans, 1857), 389-90; Picayune, September 7, 14, 22, 1878; Bee, October 16, 1858; Baton Rouge Advocate, November 29, 1878.

Another mutual aid society called the Young Men's Crescent and Star Benevolent Association was established in 1867 by "the elite of the Second and Third Districts" of New Orleans. Membership requirements included "an unstained character," a five dollar initiation fee, and dues of one dollar per month. The association promised to provide medical attention and the necessary drugs to any sick member, to pay seven dollars per week during the period of his illness, to provide proper burial insurance, and to furnish assistance to the widow and orphans of any deceased member.⁷⁸

Women in New Orleans participated actively in the work of epidemic relief through such organizations as the Ladies' Benevolent Society, the Ladies' Physiological Society, and Les Dames de la Providence. They collected and distributed funds and provisions; they called upon the sick and supplied kindness and encouragement to the destitute families along with food, medicine, and clothing.⁷⁹

⁷⁸Bee, October 20, 1867; Picayune, October 20, 1867.

⁷⁹Picayune, September 9, 1841, August 25, 1878; Baton Rouge Advocate, November 29, 1878; Gardner & Wharton's New Orleans Directory for . . . 1858, 389; Robinson, Diary of a Samaritan, 194-95.

Les Dames de la Providence, an association of "married ladies belonging to the most respectable class of our Creole population," went about in groups of three or four, attending to the needs of yellow fever patients of their own sex, and liberally dispensing relief with their funds collected from generous donors.⁸⁰ Among the lot of female societies, undoubtedly there were some do-gooders and busy-bodies who accomplished little of value. But, in general, the women's groups seem to have contributed a creditable share in carrying out the overwhelming task of relieving the distress occasioned by epidemic yellow fever. One other group of unusually active women should be noted here--women whose tireless efforts in nursing the sick was of unquestionable importance: the Sisters of Charity.⁸¹

Probably the most notable of all the New Orleans benevolent societies established specifically to relieve the sick and the destitute in epidemic seasons was the Howard Association, named after the eighteenth-century English philanthropist, John Howard. Not only was that

⁸⁰Robinson, Diary of a Samaritan, 194, 266.

⁸¹Ibid., 194-95.

association the first of its kind to be organized in the Crescent City, but its activities continued throughout the nineteenth century, and its work extended to many other disease-ridden communities of the South. Founded in 1837 as an informal group, the Howard Association was incorporated in 1842 by the Louisiana Legislature and granted a twenty-five year charter. On the expiration of its charter, the association was reincorporated in 1867, and again in 1893.⁸²

With the appearance of epidemic yellow fever in New Orleans, the Howards set to work to alleviate the unfortunate circumstances of the indigent sick and of those families suffering deprivation because of the epidemic situation. The city was divided into districts, and each member was assigned to work within a certain district. Advertisements in newspapers and placards at the street corners furnished the names and addresses of the Howard Association members. Before breakfast and before dinner the member was supposed to be on hand at his residence to

⁸²Fortier, Louisiana, I, 515: Report of the Howard Association of New Orleans, of Receipts, Expenditures, and Their Work in the Epidemic of 1878 . . . (New Orleans, 1878), 5-7; Stuart O. Landry, "New Orleans' Predecessor of Red Cross," New Orleans Times-Picayune Magazine Section, December 19, 26, 1937.

interview the applicants for relief who gathered there. After making a record of the names and addresses of yellow fever cases reported to him and of those persons requesting special relief, he set out on his daily and nightly rounds. First delivering the list of new cases to the physicians employed by the Howards, the member then proceeded with his tasks, visiting old patients, checking on persons requesting relief, visiting new cases, purchasing and even administering medicine, hiring and assigning nurses--and so on, day after day, night after night.⁸³

In addition to the house-to-house visits, the provision of medical care, nursing, and medicines, and the granting of outright relief to the poor, the Howard Association also established and supervised temporary yellow fever hospitals, convalescent infirmaries, and orphan asylums.⁸⁴

In 1847 the Howards attended to about 1,200 yellow fever cases; in 1853, over 11,000 cases; and in 1878, more than 21,000 cases in New Orleans and nearly 12,000 in other communities. Their expenditures in the extensive visitation

⁸³Robinson, Diary of a Samaritan, 72, 125-26, 134-35.

⁸⁴Ibid., 166-67, 280-85.

of 1878 totaled almost \$400,000. During every epidemic which occurred, contributions poured into the association's treasury from all sections of the country. The Howards of New Orleans then forwarded supplies, medicine, nurses, and financial aid to other afflicted communities in Louisiana and neighboring states as well. Sometimes a few members of the New Orleans association actually went in person to the other plague-stricken towns and helped to organize the relief work. The influence of the Crescent City's Howard Association led to the establishment of Howard Associations in many southern towns for the purpose of dealing with their own pestilential calamities.⁸⁵

Throughout the period of yellow fever epidemics in Louisiana, although other organized groups performed valuable services and shared in the work of relief, no other single association engaged in as many different activities as did the Howards of New Orleans. Their work

⁸⁵Fenner, Epidemic Yellow Fever, 69-70; Robinson, Diary of a Samaritan, 86, 321-22; Report of the Howard Association of New Orleans, Epidemic of 1853 (New Orleans, 1853), 3, 23-26; Report of the Howard Association of New Orleans . . . 1878, 17-24; Howard Association Memorandum Books, Addendum, 1878, John B. Vinet Papers (Louisiana State University Archives, Baton Rouge).

benefited thousands of persons in dozens of southern communities during more than a half-century of pestilential visitations. In an age before man had learned how to combat yellow fever, epidemics could neither be prevented nor controlled. They simply had to run their course until cold weather arrived or until the supply of susceptible victims gave out. Under the circumstances, the only way men could fight the pestilence was by attempting to alleviate its effects--the suffering and distress which resulted from the presence of widespread disease. The Howard Association deserves special recognition for its persistent efforts toward that end.

The epidemic of 1878 directly and indirectly affected so many persons that a division of labor in the relief work became necessary. While the Howard Association restricted its activities to the provision of physicians, nurses, and medicines for yellow fever patients, the Peabody Subsistence Association was organized to handle the collection of food and supplies and to dispense those provisions to the destitute.⁸⁶

In 1905 when the city, state, and federal public

⁸⁶Picayune, August 31, September 5, 1878.

health authorities assumed control of locating and isolating yellow fever cases, the Howard Association's traditional medical aid services were no longer the vital necessity they had been in an earlier period. The need for charitable activities, however, persisted. The Charity Organization Society was established that year in an attempt to coordinate all such activities by means of a single association which would receive and distribute all funds and provisions contributed for the relief of those persons affected by the temporary economic dislocation resulting from the epidemic.⁸⁷

Nineteenth-century commentators repeatedly praised New Orleans for exhibiting an extraordinary degree of benevolence, unexcelled by any other community in the world.⁸⁸ Certainly the activities of the Howards and the numerous other benevolent organizations, as well as the unceasing efforts of the physicians and clergymen, seem to substantiate the judgment that the people of the Crescent City displayed an unusual spirit of charity and a

⁸⁷Ibid., August 13, 1905.

⁸⁸N. O. Med. & Surg. Jour., IV (September, 1847), 275; Bee, September 16, 1841, September 4, 1847; Picayune, September 12, 1858; Robinson, Diary of a Samaritan, 71; Duffy (ed.), Parson Clapp, 109.

willingness to minister to the needs of their suffering fellowmen. Such altruistic behavior in the midst of a pestilential visitation, however, stands in striking contrast to the callous, indifferent attitudes so often expressed in regard to the fever: Although periodically the disease added thousands to the mortality lists, its principal victims--the indigent immigrants--were expendable; New Orleans would always attract more than sufficient newcomers to fill their places!

Many persons in the Crescent City were capable of voicing such opinions which seemed utterly indifferent to the loss of thousands of lives, and time after time the city's inhabitants managed to suppress the unpleasant memories of destructive epidemics. But, when faced with the grim reality of pestilential yellow fever, a considerable number of New Orleanians manifested a benevolence of action during the crisis which scarcely reflected those views supposedly prevailing in the city.

In discussing the outstanding display of "Christian philanthropy" in the Crescent City during epidemic outbreaks, Theodore Clapp noted that accounts of plague-stricken cities in ancient Greece and medieval Europe described a situation in which complete demoralization

accompanied the ravages of the disease, destroying the customary bonds of friendship, moral responsibility, honor, and religion. Epidemics had ordinarily resulted in "wild, frantic excesses, neglect of the sick and dying, the plunder of houses, murder, and other atrocities too awful to mention."⁸⁹ That description of European plagues would hardly apply to the epidemic conditions resulting in the Crescent City, although numerous instances of drunkenness, neglect, plunder, extortion, and profiteering undoubtedly occurred in every yellow fever epidemic which New Orleans suffered.

According to an article in De Bow's Review on the New Orleans epidemic of 1853, "Crime was very prevalent, if we may judge from the lengthened police reports in the journals. . . ." Outlining the various aspects of the "moral epidemic," the author mentioned the "utter thoughtlessness and indifference to even the most horrid things in life," such as the morbid curiosity of the crowds who gathered about the cemeteries to watch the process of interment and seemed undisturbed by the ghastly sights and putrid fumes. As additional symptoms of the "moral

⁸⁹Duffy (ed.), Parson Clapp, 110.

epidemic," he included the "songs and obscene jests of the grave-diggers," the presence of the "huxter-women vending their confections" just outside the cemetery gates, and the cursing and disrespectful whistling of the men who drove the hearses.⁹⁰ Such illustrations of man's depravity, however, could hardly compare with the "wild excesses" occurring in other places, other times.

The state of confusion, disorder, suffering, and despair engendered by any serious pestilential visitation was greatly intensified in several particularly violent outbreaks. Probably the most unpleasant aspect of any yellow fever epidemic in New Orleans, as well as the most difficult problem to handle, involved the burial of the dead; and in that most destructive of all the epidemics, in 1853, carrying out the task of prompt interment became almost impossible. Within a period of about four months in 1853, over 8,000 persons died in New Orleans of yellow fever alone; within a single week over 1,300 persons fell victim to the pestilence. People died faster than graves could be provided. On one occasion, an accumulation of coffins at a cemetery gate remained unburied for well

⁹⁰De Bow's Review, XV (December, 1853), 624.

over twenty-four hours. The chairman of the municipal Committee on Cemeteries upon checking that graveyard found seventy-one bodies "piled on the ground, swollen and bursting their coffins, and enveloped in swarms of flies." In order to speed up the process of interment, long, shallow trenches received the coffins which were packed in and covered with a thin layer of earth. As the daily rains rapidly washed away the earth and exposed row after row of coffins to the blistering sun, "The coffins, made of plain pine corporation lumber, and but slightly put together, allowed the putrefaction of the bodies to ooze out, filling the air, far and near, with the most intolerable pestilential odors."⁹¹

One of the most graphic descriptions of the graveyard situation appeared in the New Orleans Daily Crescent of August 11, 1853:

At the gates, the winds brought intimation of the corruption working within. Not a puff but was laden with the rank atmosphere from rotting corpses. Inside they were piled by fifties, exposed to the heat of the sun, swollen with corruption, bursting their coffin lids, and sundering, as if by physical effort,

⁹¹Robinson, Diary of a Samaritan, 151; De Bow's Review, XV (December, 1853), 620-21, 629; Crescent, August 9, 1853; Picayune, August 8, 1853.

the ligaments that bound their hands and feet. . . . What a feast of horrors! Inside, corpses piled in pyramids, and without the gates, old and withered crones and fat huxter women . . . dispensing ice creams and confections, and brushing away . . . the green bottle-flies that hovered on their merchandise, and that anon buzzed away to drink dainty inhalations from the green and festering corpses.

Under these revolting circumstances it was difficult to keep enough gravediggers working to bury the bodies that poured into the cemeteries. Both Negroes and whites were hired at five dollars per hour. Even strong stomachs required bracing with frequent draughts of potent spirits to endure such sights and smells.⁹²

At the height of the scourge's activity, death claimed entire families, and corpses were discovered in bed, in stores, and in the streets. Many a grim scene and tragic incident presented itself in the course of every epidemic which occurred. During the simultaneous epidemic activity of Asiatic cholera and yellow fever in New Orleans in 1832, for example, one of the hospitals, completely filled with corpses and abandoned by all the surviving medical attendants, was burned together "with its

⁹²Crescent, August 11, 1853.

ghastly contents" by the order of the mayor.⁹³

During several yellow fever epidemics in New Orleans, cannons were fired and barrels of tar burned in the streets in an attempt to counteract the pestilential atmosphere. Added to all the other horrors of black vomit and delirium, death and funeral processions, the roaring cannons and the rising columns of smoke made the city seem even more the headquarters of the "King of Terrors."

Demonstrating its highly pervasive influence, yellow fever even made its way into the arena of politics, at least on the level of speculative discussion and controversy. For example, in the convention assembled in 1845 to revise the constitution of Louisiana, the question of a suitable time for holding general elections became a matter for debate. Some delegates argued that the elections should be held sometime during the period when yellow fever ordinarily prevailed. By so doing, it was contended, "the birds of passage" (that is, the strangers who, fearing the pestilence, left the city each summer) would be denied the vote, which they did not deserve in any case, "having only temporary interest and residence" in New Orleans. Other

⁹³Kendall, History of New Orleans, I, 134, 177-78.

delegates argued that such a provision would prevent at least half the "resident" population from exercising the vote since so many natives and long-time residents also were absent from the Crescent City during the sickly season. Dr. Bennet Dowler referred to this particular debate as an illustration of yellow fever's political implications.⁹⁴

Another instance in which the Saffron Scourge became a factor in a bit of political speculation occurred during the Great Epidemic of 1853. It was reported in one Crescent City journal that the "vile whigs" were rejoicing at the "thinning of the ranks of the democracy by the great leveller, death." According to the Crescent editor, the vast majority of those persons leaving New Orleans to spend the summer at the Gulf shore watering places or in the North belonged to the Whig Party; whereas, the majority of inhabitants remaining in the city--including many "unacclimated"--were Democrats. The editor judged it "horrible . . . that men should coolly reason, in the midst of a pestilence, on the probable good or bad fortune to befall a political party in consequence of a terrible mortality. . . ."95

⁹⁴N. O. Med. & Surg. Jour., XV (November, 1858), 733.

⁹⁵Crescent, August 18, 1853.

But yellow fever was not merely a topic sometimes alluded to in political conversation; on numerous occasions, state and local authorities found it necessary to enact measures in the fields of quarantine and public health, mainly because of public pressures deriving from the impact of epidemic yellow fever. That disease undoubtedly had more influence on the development of public health in Louisiana than any other single factor.

Even in the worst of the yellow fever epidemics with all their calamitous and depressing aspects, there were always those who added comic relief to the scene of adversity--those persons who exercised a bizarre sense of humor and contrived peculiar jokes or stories based on extreme and ridiculous exaggerations of epidemic conditions. One epidemic "tall tale" which circulated around New Orleans in 1853 declared that "the fever was so bad at the St. Charles Hotel, that as soon as a man arrived and registered his name they immediately took his measure for a coffin, and asked him to note down in which cemetery he desired to be interred." According to another story of the same variety, "as soon as a man arrived on one of the steamboats, the officers of the Board of Health immediately took his name and entered it in their books as deceased, to save all

trouble in calling upon him again."⁹⁶

Operating upon the creative imaginations of various individuals, the Saffron Scourge stimulated the production of a number of poems and at least one satirical novel. In a highly amusing narrative with a serious purpose, Doctor Dispatchemquic: A Story of the Great Southern Plague of 1878, James Dugan of New Orleans satirized the attitudes and activities of "so-called physicians" and some of the benevolent associations. The scene of the story was New Orleans during the epidemic of 1878; the three principal characters were Drs. Dispatchemquic, Kwarantenus, and Kancurum. Characterized by pomposity, pedantry, arrogance, and superficiality, Dr. Dispatchemquic hastened most of his patients to their final destiny. But, as he explained it, the fatalities were neither his fault nor the fault of the system, but simply nature's will. Kwarantenus was Dispatchemquic's colleague, friend, and echo. Dr. Kancurum, on the other hand, had spent a lifetime studying yellow fever and was rather skillful in treating his patients. Observing that many "nurses" hired by a certain benevolent

⁹⁶History of the Yellow Fever in New Orleans, during the Summer of 1853 with Sketches of the Scenes of Horror which Occurred during the Epidemic . . . by a Physician of New Orleans, 98-99.

association were persons of low character and interested only in easy money, who neglected their duties and instead consumed the brandy and champagne provided for the yellow fever patients, Dr. Kancurum commented at length on the serious need for a nurses training school in New Orleans. Indirectly criticizing the inadequacy of most medical education in that period, the author also directed a bit of not-so-gentle satire at some of the ladies' benevolent societies. Active participants in the ridiculous narrative, the "Ladies Good Samaritan, Christian Flower Mission and Theological Association of New Orleans" visited the poor and sick, offered gratuitous advice, and distributed flowers among the lower classes for the purpose of cultivating among them a love of beauty. Dugan portrayed these "charitable" ladies going about doing their duty, distastefully, but determinedly, with their noses in the air.⁹⁷

After the epidemic of 1853, Dr. Bennet Dowler explained that the "contrast between the beauty and repose of nature and the march of death" had provided the inspiration for "several poetical contributions" relating to

⁹⁷James Dugan, Doctor Dispatchemquic: A Story of the Great Southern Plague of 1878 (New Orleans, 1879).

the pestilence. Some of the poems had been cut short by the very "pest-king" whose activities the poetasters were attempting to describe as, Dowler related, "the muse . . . [trailed] her fast-failing wings in the polluting streams of blood and black vomit."⁹⁸ Dowler himself was capable of devising rather graphic images, even in his medical writing.

The destructive visitation of 1878 gave rise to several long poetic works, among which were "Dorothy--Gift of God, A Ballad of the New Orleans Plague of 1878" by Paul H. Hayne, "Andromeda Unchained" by Henry Guy Carleton, and "The Welded Link" by Judge J. F. Simmons. Simmons, of Sardis, Mississippi, also wrote numerous short poems based on epidemic themes, including "The Little Faded Dress," "Minnie's Farewell," and "I am Ready."⁹⁹ Although none of these works even approach the

⁹⁸Dowler, "Tableau of the Yellow Fever of 1853," loc. cit., 62.

⁹⁹Paul H. Hayne, "Dorothy--Gift of God. A Ballad of the New Orleans Plague of 1878" (undated pamphlet in Howard-Tilton Memorial Library, New Orleans); Henry Guy Carleton, "Andromeda Unchained" (New Orleans, 1878, clipping in Howard-Tilton Memorial Library, New Orleans); J. F. Simmons, The Welded Link, & Other Poems (Philadelphia, 1881).

level of great (or perhaps even good) poetry, they are all interesting as additional examples of yellow fever's ubiquitous influence on man's intellect and imagination as well as his more mundane social and economic activities.

In "The Welded Link" Judge Simmons maintained that the generosity, charity, and kindness of the North toward the South during its pestilential disaster of 1878 had accomplished "what arms never could have done. It conquered the Southern people and the Southern heart."¹⁰⁰ Simmons was apparently not alone in subscribing to that view. The editor of the New Orleans Picayune had declared in September of 1878 that the generous contributions from the North went far in relieving "the Southern heart of its bitterness and memory of its wrongs." Furthermore, he said, "In the name of that philanthropy which has overswept all geographical and party lines, we declare that the war is over, now at last and forever."¹⁰¹

These descriptive lines by Simmons portray rather effectively something of the impact of epidemic yellow fever on communities which fell under its devastating influence:

¹⁰⁰Simmons, The Welded Link, 13-14.

¹⁰¹Picayune, September 22, 1878.

'Contagion' swept like wave of solid fire--
 Death in its train and desolation dire--
 O'er homes and hearthstones, towns and cities fair,
 And left its countless sad mementoes there.

And over all, as with a leprous blight,
 Spread gloom more dismal than the darkest night.

The busy hum was hushed on mart and street,
 The latter pressed alone by hurrying feet
 Of Good Samaritan or anxious nurse,
 Or--their work ended--overladen hearse.
 Devoted priest and pastor, hand in hand,
 Gentile and Jew alike together band,
 Some consolation, some relief, to bring
 To stricken victims, or to sooth death's sting.¹⁰²

While Dugan's novel emphasized the callous, unscrupulous, insensitive, hypocritical, and other deplorable human traits, Simmons concentrated on the manifestations of generosity, kindness, and altruism. But, a more accurate evaluation of epidemic circumstances was provided by a New Orleanian writing on the visitation of 1853. "There are few events in history which afford more striking illustrations of the good and bad qualities of humanity," he declared, or "which contain more of the 'romance of real life'--and present more impressive and startling pictures of virtue and vice, of sorrow and suffering, of generosity and selfishness, of true courage and cowardice, of charity

¹⁰²Simmons, The Welded Link, 24, 32.

and meanness, than the visitation of a destructive
pestilence. . . ."103

¹⁰³Walker, "History and Incidents of the Plague in
New Orleans," loc. cit., 797.

CHAPTER X

SUMMARY AND CONCLUSIONS

From 1796 through 1905 yellow fever visited New Orleans almost every summer and on at least thirty occasions developed into a full-fledged epidemic. Frequently extending from the Crescent City along the avenues of trade and travel to other communities in Louisiana, the pestilence disrupted the normal functioning of the economic system together with every phase of human activity, and spread death and destruction, suffering, anxiety, and grief all along its path.

Between 1796 and 1850, New Orleans played host to the fever every summer and suffered some twenty extensive epidemics. Each seemed more virulent than the previous one, as succeeding epidemics first claimed hundreds of lives, then thousands. Mainly because of the Saffron Scourge, the Crescent City acquired a reputation as the "Necropolis of the South." Still its population increased year after year as immigrants poured in from Europe and other sections of

the United States to take advantage of the economic opportunities available in that port city so favorably located for commercial activity.

Faced with the frequent occurrences of a death-dealing epidemic malady which sometimes seemed to appear spontaneously without obvious connection to a prior case and which spread in an erratic and mysterious fashion, perplexed physicians and laymen debated the nature, causation, and transmission of yellow fever in their search for a satisfactory explanation of its peculiar behavior. Lacking a knowledge of disease-producing microorganisms, human carriers, and insect vectors, they became hopelessly involved in the maze of existing etiological and epidemiological conceptions as they tried to apply those conceptions to the activity of the yellow pestilence. Theoretical positions stood in direct relation to the method of action suggested to combat the disease. Those who believed yellow fever to be a contagious and imported malady favored quarantine measures to prevent its introduction; those who believed that it originated locally in filth and putrefaction promoted sanitary regulations.

Municipal boards of health designed to supervise the work of sanitation in New Orleans were established on

several occasions during the first half of the nineteenth century, but they failed to function effectively, lacking financial support and the power of enforcement. Neither the citizenry at large nor the governing authorities were yet ready to accept strict regulatory legislation in the interest of public health. Several legislative experiments with quarantine measures (by city and state) were also attempted. But without a clear knowledge of yellow fever epidemiology, neither the legislators nor the quarantine officials could close all the loopholes through which the pestilence might enter. The continued appearance of yellow fever in New Orleans in spite of quarantine, together with the vociferous opposition and pressure by commercial interests, led to the abandonment of quarantine measures in 1825. No further state legislation was passed on that subject until the 1850's--the decade of the Great Epidemics. The visitations of 1853 and 1854 again forced the issue and stimulated a public demand for state action against the destructive malady.

During that first half-century of yellow fever's activity in New Orleans, many inhabitants of the Crescent City developed an attitude of indifference toward the scourge. It was expected to appear each year and to claim

at least a few hundred victims, perhaps more. Those persons who had survived an attack of yellow fever or who believed themselves "acclimated," and thus immune, by virtue of birth or long residence in the city did not fear the coming of the fever. Persons who were afraid, if they were financially able, fled the city during the sickly season each summer, or at least left town on the approach of an epidemic. The newcomers, the indigent immigrants among the working classes who always furnished the bulk of yellow fever's victims, left no records by which one might determine their relative fear or indifference; at any rate, few could have left the city even had they so desired.

The articulate, vocal upper classes of New Orleans failed to see their beloved city as the "Necropolis of the South." Far from considering New Orleans the unhealthy city described by outsiders, the commercial interests, newspapers, and physicians joined in defending their community's good name against all outside criticism. Further, they praised New Orleans as one of the healthiest cities in the Union--except during epidemic years. But extensive visitations occurred only once or twice in each decade, they contended, and even then the disease ordinarily limited its ravages to the intemperate, ignorant, unclean

immigrant laboring classes.

Until a careful statistical study of New Orleans' mortality records had been made and compared with the records of other cities, the delusion regarding the city's health continued to find favor as an article of faith among its ardent defenders; throughout the century one can still find expressions of this view. But by 1850 several physicians had begun to investigate the problem and had unearthed and compiled enough statistical evidence at least to challenge the deep-rooted belief. The climax of yellow fever's activity in New Orleans and Louisiana, which came in the 1850's with four violent epidemics occurring in rapid succession (1853, 1854, 1855, and 1858), further stimulated an interest in mortality records and led many to question the notion that New Orleans was basically healthy. The indifference of previous years gradually began to give way to an increasing interest in public health legislation.

The epidemic of 1853 was not only the most devastating epidemic New Orleans ever experienced (claiming over 8,000 persons in about four months' time), but it was also the most widespread visitation up to that time, spreading to many communities throughout Louisiana and the South where it had never appeared before. Small towns unaccustomed

to the pestilence (which was so familiar to New Orleans) suffered even more, in a sense, than the metropolis. With- in a population never before exposed to the disease, unlike that of the Crescent City, every individual was susceptible to attack. In some small communities, with the inhabitants falling sick one by one, day by day, there were scarcely enough well persons left to attend to the patients and to bury the dead.

At the close of the 1853 visitation, a number of communities clearly traced the source of their own outbreaks to New Orleans. Thereby convinced of the disease's transportability, they favored legislation to prevent its initial introduction into the state. Some New Orleans medical men, believing that yellow fever had been introduced from Latin America, began to advocate quarantine regulations, although the majority of the medical profession still considered yellow fever an indigenous product deriving from locally generated miasms. In spite of the prevailing medical opinion and the opposition of commercial interests, after another extensive yellow fever epidemic erupted the very next year, 1854, the Louisiana legislators enacted a measure in March of 1855 providing for quarantine regulations and a State Board of Health to administer those regulations.

Thus, epidemic yellow fever resulted in Louisiana's establishing the first state board of health in this country. Additional legislation during the latter nineteenth century gradually expanded the Board's functions and increased its powers until it finally evolved into an active, effective, and vitally important state institution.

Following the epidemic of 1858, yellow fever began its gradual decline in frequency and virulence, before the discovery of the mosquito transmitter and before the development of an adequate quarantine system--for reasons not completely explicable even today. Nevertheless, when the absence of epidemic yellow fever in federally occupied New Orleans during the Civil War coincided with General Butler's stringent quarantine and sanitation regulations, which were retained and enforced to some extent by his successor, General N. P. Banks, many persons were persuaded that yellow fever had been prevented by sanitation, or quarantine, or both.

During the latter nineteenth century, yellow fever appeared intermittently in New Orleans and Louisiana, claiming from one to sixty lives in some years and none at all in others. Five outbreaks occurred which might be considered epidemic in extent, but in spite of the larger population

with a preponderance of unacclimated subjects, only two epidemics--in 1867 and 1878--could compare with earlier visitations in terms of mortality.

The epidemic of 1878 stands forth as the most extensive yellow fever visitation ever to occur in the United States. Spreading throughout the South and the Mississippi Valley, the disease claimed approximately 20,000 lives of the 120,000 cases in the eleven states affected and cost the country an estimated one hundred to two hundred million dollars. This destructive pestilence resulted in an intensified fear of the disease in an extensive area of the country which persisted through the remainder of the century and motivated the shot-gun quarantines and the interference with railroad transportation of freight, passengers, and the United States mail during the outbreak of 1897.

Furthermore, the 1878 disaster led to an increasing demand for national action in the field of quarantine and public health, especially on the part of the interior states which no longer trusted the Gulf states to administer an effective quarantine system. As a result, in 1879 Congress created the National Board of Health to cooperate with state and local health authorities in maintaining strict quarantine regulations. Representing an initial

attempt by the federal government to assume a more active role in public health activities, that institution failed within five years' time, partly because of inherent administrative defects, partly because of obstacles posed by defenders of states rights, chief among which was the Louisiana State Board of Health headed by Dr. Joseph Jones. Nevertheless, after the demise of the National Board, the United States Marine Hospital Service, a long-established federal agency originally designed to provide pre-paid medical care to American seamen, received additional duties and powers (in 1883 and 1893) in relation to quarantine and public health. This federal agency ultimately evolved into the United States Public Health Service (1902 and 1912). Following the yellow fever epidemic of 1905, the federal government assumed full control of maritime quarantine by an act of Congress passed in June of 1906. Hence, it seems that epidemic yellow fever not only influenced the development of public health institutions in Louisiana (and in other states as well), but also served as a prime factor in the evolution of a concept of national public health and in bringing about federal action within that area.

In the epidemic of 1897, federal health officers in cooperation with state and local officials performed such

valuable services as inspection of railroad freight and passengers, fumigation of mail, establishment of detention camps, and the issuance of health certificates in an attempt to untie the transportation entanglement resulting from intra-state and interstate quarantines. In 1905 the United States Public Health and Marine Hospital Service actually took charge of the campaign against the fever in New Orleans at the request of the local and state authorities. Systematically employing measures based on the recently-formulated mosquito doctrine (announced by the Reed Commission in 1901), the federal officials worked side by side with local and state public health authorities to curb the spread of the pestilence. Since the 1905 outbreak, no yellow fever epidemic has occurred in the United States.

In the realm of theory, an investigation of the ideas relating to yellow fever's nature, causation, and transmission, and the gradual modification of those concepts provides a good picture of one phase of nineteenth-century medical thought in the process of evolution, as well as a view of the great transitional period in medical science itself. From philosophical approach to scientific method, from analogy and post hoc ergo propter hoc to microscopic observations and controlled experiments, from miasms to

germs, and from fomites to mosquitoes, the field of medicine ultimately emerged from its centuries-old cocoon of confusion into a new kind of confusion--but with an ever-increasing fund of knowledge which has been used successfully in preventing the recurrence of yellow fever and certain other epidemic diseases.

Many diverse non-medical elements may be observed in close association with nineteenth-century ideas and attitudes relating to yellow fever--such as a laissez-faire point of view and Social Darwinism, which seem to have bolstered the opposition to regulatory measures concerning yellow fever, quarantine, and public health; pro-slavery and race prejudice in connection with yellow fever's mild effect on the Negro; class consciousness in placing the blame on the lower elements of society, particularly foreign immigrants, for New Orleans' high mortality rate, and furthermore, writing off those lives as expendable; sectionalism, exhibited in defending the disease-ridden South against criticism from the disease-ridden North; and states rights arguments employed to strengthen popular resistance to federal encroachment in quarantine operations.

Aside from epidemic yellow fever's intellectual implications, the disease exerted a profound impact on

community life and human behavior. Its appearance in a community resulted in an immediate flight of the panic-stricken, after which many of those persons who remained and escaped attack devoted their attentions to those who were less fortunate. The medical profession and the clergy labored constantly in their appointed tasks. Unemployment, resulting from the interruption of commercial activity and economic activities in general, added to the critical situation produced by sickness and death. To relieve in some measure the destitution of the indigent sick and the unemployed, volunteer relief organizations sprang up in many areas--but particularly in New Orleans. The disorder and desolation of a plague-stricken locality during particularly violent epidemics presented a picture which observers later characterized as essentially indescribable.

For more than a century the Saffron Scourge was an integral aspect of life (and death) in Louisiana, especially in New Orleans. For its destructive toll levied against human life, energy, and property, this disease should be considered a villain in the drama of Louisiana history. Yet no one can deny its influence in promoting the development of public health, and for that significant contribution at least the villain must be given some credit.

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VITA

Jo Ann Carrigan was born in Washington, Arkansas, September 10, 1933. She was graduated from Washington High School in 1949, received the Bachelor of Arts degree from Henderson State Teachers College, Arkadelphia, Arkansas, in 1953, and after one year of high school teaching in Sheridan, Arkansas, began her postgraduate study in the Department of History at Louisiana State University in September of 1954. She received the M.A. degree in August of 1956 and continued in graduate school at Louisiana State University to work toward the Ph.D. degree. From January through August of 1959, she held an instructorship in the Department of Social Sciences at Henderson State Teachers College, and afterward returned to Louisiana State University to complete the requirements for the doctorate. Currently working under a Gottlieb Scholarship, she is a candidate for the Ph.D. degree in June, 1961.

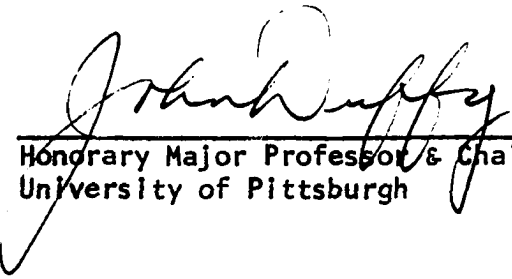
EXAMINATION AND THESIS REPORT

Candidate: CARRIGAN, JO ANN

Major Field: History

Title of Thesis: The Saffron Scourge: A History of Yellow Fever
in Louisiana, 1796-1905

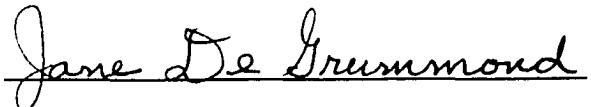
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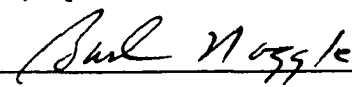

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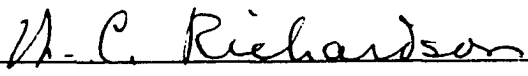

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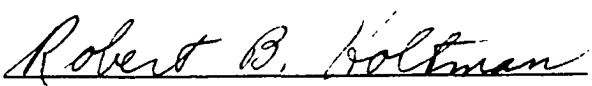

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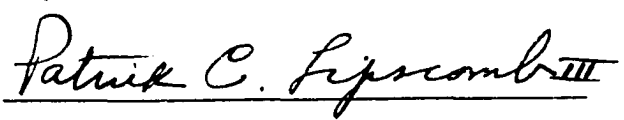

J. L. Lane


Paul Nosske


H. C. Richardson


Robert H. Rein


Robert B. Holtman


Patrick C. Lipscomb


R. C. Williamson

Date of Examination:

8 May 1961